


**EXPERT REPORT  
CONCERNING FUTURE COSTS AT THE COEUR D'ALENE BASIN  
IN THE ASARCO LLC CHAPTER 11 BANKRUPTCY MATTER  
CASE NO. 05-21207**

*Prepared by*

  
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June 15, 2007

## 1 INTRODUCTION

2 My name is Paul R. Ammann. I was a Cofounder and Principal of *The Brattle Group*, an  
3 international economic, management, and environmental consulting firm with offices in  
4 Cambridge, MA; Washington, DC; San Francisco, CA; London, United Kingdom; and Brussels,  
5 Belgium. Since 2001, I have continued a consulting relationship with *The Brattle Group* as a  
6 Senior Advisor. I have over twenty-five years of industrial experience in the development and  
7 engineering analysis of environmental, chemical, and metallurgical technologies. For the last  
8 twenty five years I have focused on technology and environmental consulting for corporations and  
9 law firms. My experience includes evaluating chemical and manufacturing technology  
10 developments, environmental compliance strategies, developing costs for new technologies and  
11 products, and estimating future environmental costs. I have authored and presented a number of  
12 professional papers in these areas and testified in Federal Court. I have B.S. and M.S. degrees in  
13 chemical engineering from the Massachusetts Institute of Technology. Additional background,  
14 experience, and qualifications are stated in my resume, attached as Appendix A.

15 The opinions expressed in this report are based on my education; training and experience in  
16 environmental, business, and economic issues; my work experience; a visit to the site; discussions  
17 with the United States Environmental Protection Agency (“EPA”); and other individuals with  
18 knowledge of the site; and the documents listed in Appendix B.

19 I am being compensated on a time and materials basis for my services in this matter at my  
20 standard hourly rate of \$450.

21 The United States Department of Justice (“USDOJ”) has retained *The Brattle Group* to provide  
22 expert consultation regarding the matter of the Asarco LLC Bankruptcy. I have been asked by  
23 the USDOJ to estimate future human health and environmental clean-up costs at Operable Unit  
24 (“OU”) 3 of the Coeur d’Alene Superfund Site using available engineering and cost information.

1 Based on the information I have reviewed in this matter, I have concluded the future remedial  
2 costs at the site have an expected value of **\$2,053,677,560** dollars as of June 30, 2008.

3 In addition, the USDOJ asked me to combine the past and future claims put forth by other experts  
4 working on behalf of the USDOJ. The range, including my estimate and defined by the range of  
5 Natural Resource Damages (“NRD”) claim is **\$2.536 to \$3.071 billion**, with prejudgment interest  
6 calculations to be unified at the time of trial.

7 This report sets forth the details of my opinions to date, the bases and reasons that support my  
8 opinions, and the data and other evidence upon which I have relied in forming my opinions. I  
9 have considered the information available to me at the time of its preparation. I may supplement  
10 or modify this report based on new or additional information or to rebut or respond to any  
11 information or conclusions offered by the debtor or its experts.

## 12 **THE COEUR D’ALENE SUPERFUND SITE**

13 The Coeur d’Alene Superfund Site (“Site”) is a result of over one hundred years of mining-related  
14 activities for precious metals, lead, and zinc. The result of this mining activity, particularly in the  
15 Upper Basin, was the disposal of mining wastes which contained significant amounts of hazardous  
16 metals, such as lead, zinc, and cadmium, in the surface waters and the areas surrounding the  
17 Upper Coeur d’Alene River. In 1983, the Bunker Hill Mining and Metallurgical Complex was  
18 listed on the National Priorities List. The Superfund Site includes the 21-square mile Bunker Hill  
19 “Box,” consisting of the historic metal smelting operations and the immediate surrounding area  
20 (OU 1 and OU 2), the Coeur d’Alene River corridor, adjacent flood plains, downstream water  
21 bodies, tributaries, and fill areas (OU 3).

22 The Record of Decision (“ROD”) for OU 3 describes the plan for remediation within the Coeur  
23 d’Alene Basin, except for the Bunker Hill Box (OUs 1 and 2). EPA issued the ROD for OU 3 on

1 September 12, 2002.<sup>1</sup> The study and remedial program was divided into two major components:  
2 Protection of Human Health and Ecological Protection. The latter component was further divided  
3 into (1) the Upper Basin; (2) the Lower Basin including Coeur d'Alene river, adjacent lateral  
4 lakes, flood plains, and associated wetlands; (3) Coeur d'Alene Lake; and (4) depositional areas  
5 of the Spokane River. For purposes of this estimation hearing, EPA has developed a  
6 comprehensive remedy for human health and the environment as presented in the report of Cami  
7 Grandinetti, a Unit Manager in EPA Region 10.<sup>2</sup> I find the activities planned by EPA to be  
8 reasonable for addressing the human health and environmental problems in the Basin. While  
9 remedial work on OU 3 began after the ROD was issued in 2002, it will continue well into the  
10 future as described in this report, and by Ms. Grandinetti.

11 In connection with this matter I was asked to estimate future remedial costs associated with OU 3.  
12 I have developed estimates of future costs for components described in EPA's comprehensive  
13 remedy. The bases for my calculations are the current cost estimates developed by URS  
14 Corporation<sup>3</sup> and the plan for future remedial program envisioned by EPA.<sup>4</sup> Projections have been  
15 made for the years in which capital and annual operating and maintenance costs ("O&M") will  
16 be expended by EPA, assuming that funding is available to implement the remedial actions in a  
17 timely and effective manner. After addressing the remedial costs associated with the  
18 comprehensive remedy, I consider site-wide activities including required five-year reviews,  
19 institutional controls, EPA and state oversight, and EPA direct and indirect costs.

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<sup>1</sup> Interim Record of Decision, The Bunker Hill Mining and Metallurgical Complex, Operable Unit 3, September 12, 2002 ("ROD"). The Interim ROD did not comprehensively address ecological risks in the Basin.

<sup>2</sup> I also consider the probability of EPA's future involvement in a Lake Management Program.

<sup>3</sup> URS Corporation, "Estimated Cleanup Costs for the Coeur d'Alene Basin, Costs Escalated to December 2006 and Pine Creek Costs Excluded," Draft as of June 8, 2007 ("URS June 2007 Cost Update"). This memorandum updated costs from the Final Feasibility Study.

URS Greiner in association with CH2M Hill White Shield, Inc., "Final (Revision 2) Feasibility Study Report, Coeur d'Alene Basin Remedial Investigation/Feasibility Study," October 2001 ("Final Feasibility Study").

<sup>4</sup> Report of Cami Grandinetti, June 15, 2007.

## METHODOLOGY

In this report, I have developed estimates of the costs to complete the remedial work planned in EPA's comprehensive remedy beginning in January, 2007.

In preparing the cost estimates, I have made the costs consistent in terms of the timing of the expenditures by applying an inflation factor to estimates prepared in dollar values prior to June 2007. Therefore, if I have an estimate in year 2005 dollars I use the Construction Cost Index ("CCI")<sup>5</sup> to bring costs to June 2007 dollars. To inflate these costs in future years to nominal dollars, that is, in the dollar amounts that are expected to be spent in each future year, including the effects of inflation, I take the estimates in June 2007 dollars and inflate them by the forecast for Consumer Price Index ("CPI").<sup>6</sup> I then calculate a present value to June 30, 2008 using the method described by M. Alexis Maniatis in Appendix C.<sup>7</sup>

In addition, Appendix D has detailed information on the cashflows generated by the activities I describe in this report.

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<sup>5</sup> The Construction Cost Index values are collected in the *Engineering News Record* or at <http://enr.construction.com/>.

<sup>6</sup> See the March 10, 2007 *Blue Chip Economic Indicators*. Over long periods of time, the Consumer Price Index ("CPI") and the Construction Cost Index ("CCI") used to inflate past costs to 2006 have performed similarly. For example, over the past ten years, the CCI has increased on average at a rate slightly faster than CPI (3.3 percent versus 2.5 percent), while over the last twenty years the CCI and CPI have grown at nearly identical rates (3.0 percent versus 3.1 percent).

<sup>7</sup> Mr. Maniatis states, "Although these environmental remediation costs will be expended over a period of years, a single amount to fund these costs must be established by a finding of the Court to resolve the government's claims in the ASARCO bankruptcy. My analysis assumes that any such finding would be made in approximately mid-2008." See pages 1-2 of his expert report.

1 **PROTECTION OF HUMAN HEALTH IN THE COMMUNITY**  
2 **AND RESIDENTIAL AREAS**

3 **Background**

4 One consequence of the years of mining and ore processing to produce precious metals, lead, and  
5 zinc in the Upper Basin has been the contamination of residential (including interiors) and  
6 commercial properties, adjacent roadways, community areas, recreational areas, and private  
7 drinking water sources in both the Upper and Lower Basins. Also, fish in the Basin waters are  
8 vulnerable to ingesting contaminants, thereby representing a threat to human health. The remedial  
9 program for each area is described in EPA's comprehensive remedy.<sup>8</sup>

10 The calculated present value as presented in the ROD in year 2002 dollars for the protection of  
11 human health was \$92,000,000.<sup>9</sup> Therefore, I have calculated the present value of the remedial  
12 work required in the future to complete the Human Health Program using realistic timing of  
13 expenditures of both construction and on-going O&M as suggested by the EPA's comprehensive  
14 remedy.<sup>10</sup>

15 **Residential Yards/Soils, Rights-Of-Way, Commercial Properties, and**  
16 **Recreation Areas**

17 In the ROD five remedial alternatives were investigated (S1 through S5).<sup>11</sup> EPA selected S4 as  
18 being most protective of human health. The selected remedy includes public notice of risks of  
19 exposure to hazardous materials and information about risk mitigation. It also includes  
20 monitoring of individuals, and removal and proper disposal of contaminated soils from residential  
21 yards and gardens. In developing cost estimates, EPA further divided this part of the remedial  
22 program into three components: (1) Residential Soils, (2) Rights-Of-Way, Commercial Areas, and  
23 Common Areas, and (3) Recreational Areas (*e.g.*, beaches and boat ramps).

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<sup>8</sup> Report of Cami Grandinetti, June 15, 2007.

<sup>9</sup> ROD, Table 12.0-1. Also included in the estimate were operating and maintenance ("O&M") costs for which the present value was calculated over thirty years at a 7 percent net discount rate.

<sup>10</sup> I rely on cost information from the URS June 2007 Cost Update.

<sup>11</sup> ROD, OU 3, September 12, 2002, pp 9-2 and 9-3.

1 Since the issue of the ROD in September 2002, EPA has implemented a number of remedial  
2 projects and the lead intervention and public information program. As of 2007, an extensive  
3 amount of remedial work remains in both the Upper and Lower Basins. Further, public  
4 information and human health evaluation programs will continue indefinitely. EPA plans to  
5 complete the remedial activities in 2010 (four years).

6 In these three programs, contaminated soils will be excavated from private and commercial  
7 properties, from street right-of-ways, and recreational areas such as beaches and boat landings.  
8 These contaminated soils will be transferred to one of six repositories in the Upper and Lower  
9 Basins. One repository, Osborn-Polaris, has been built (2002) and, according to EPA's plan, five  
10 more will be constructed in 2007 and 2008. At the end of ten years (either 2016 or 2017  
11 depending on the construction date), four of the repositories will be closed; two other repositories,  
12 the Osborn-Polaris and one in the Lower Basin, will remain open until 2037. O&M costs for  
13 maintaining the contaminated soil repositories after closure will continue indefinitely.

14 Several recreational areas in the Lower Basin were identified in the ROD as requiring remediation  
15 in the future. A few of these have been completed, and I have made adjustments accordingly.  
16 Remediation of the recreational areas will be completed in 2010.

17 Part of the remedial efforts is a continuing Information and Intervention Program and the  
18 Institutional Controls Programs, which EPA believes will continue indefinitely. For the purposes  
19 of this report I have assumed that EPA will incur costs through the year 2106. The majority of  
20 costs in present value terms required for response activities in perpetuity are captured during this  
21 period. This assumption is consistent with other reports prepared by *The Brattle Group* in the  
22 Asarco bankruptcy where activities will occur over a long time frame.

## 23 **Drinking Water**

24 Six alternatives (W1 through W6) were evaluated in the ROD.<sup>12</sup> The selected remedy, W6,  
25 included a public information program, connection of residences to public water utilities where

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<sup>12</sup> ROD, OU 3, September 12, 2002, pp 9-4 and 9-5.

1 available, and either new groundwater wells or “point-of-use” treatment for buildings not located  
2 within public water districts.

3 Since the ROD was issued, EPA has implemented a public information program and has  
4 completed a number of public water connections and point-of-use and new well installations.  
5 EPA plans to complete their remedial work in the next four years (2007 through 2010).

#### 6 **House Dust**

7 EPA considered three alternatives in the ROD.<sup>13</sup> The selected remedy included a public  
8 information program, a Vacuum Loan Program to allow residents of the region to conduct  
9 extensive cleaning of the interiors of their properties, and an aggressive house cleaning program  
10 if sampling warranted.

11 EPA will complete additional remedial work over the next four years. EPA’s comprehensive plan  
12 calls for the work to be completed in 2010. Some O&M costs will continue indefinitely in the  
13 future.

#### 14 **Aquatic Food Sources**

15 EPA considered three alternatives for protection of human health from contaminated fish or plants  
16 (F1 - F3).<sup>14</sup> EPA selected the most protective alternative, F3, which consists of an information  
17 and intervention program to inform the public and fishermen of potential risks, and an extensive  
18 fish sampling program. EPA anticipates that these programs will continue indefinitely (I have  
19 assumed one hundred years); also the fish sampling component of the program will be  
20 implemented on a five-year cycle indefinitely.

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<sup>13</sup> ROD, OU 3, September 12, 2002, pp 9-5 and 9-6.

<sup>14</sup> ROD, OU 3, September 12, 2002, pp 9-6 and 9-7.



1 The calculated present value for costs associated with the activities of the Human Health Program  
2 is approximately **\$164 million** in year 2008 dollars. See Tables D-3 and Table D-4 in  
3 Appendix D for more information.

## 4 **ECOLOGICAL PROTECTION IN THE UPPER AND LOWER BASIN,** 5 **AND THE SPOKANE RIVER**

### 6 **Background**

7 The comprehensive remedy EPA has planned for protection of human health and the environment  
8 is based on the more extensive and effective removal, disposal, containment, and treatment  
9 strategies developed in Alternative 3 in the Final Feasibility Study. This comprehensive remedy  
10 seeks to control sources of metal contaminants that lead to on-going groundwater and surface  
11 water contamination, and ecological exposure. The plan calls for remediation of the Upper Basin;  
12 the Lower Basin (including river banks, levees, and beds; wetlands; and lateral lakes); and  
13 segments of the Spokane River. I will describe each of these areas in subsequent sections.

### 14 **UPPER BASIN**

15 The Upper Basin, where most of the mining and ore processing activities took place historically,  
16 has been a primary source of metal-bearing sediments and soluble metals, such as cadmium and  
17 zinc, in the surface waters of the Coeur d'Alene River corridor. The EPA's comprehensive  
18 remedy describes the remediation of major sources in: (1) Ninemile Creek, (2) Canyon Creek  
19 Watershed, (3) South Fork Watershed, (4) Upper South Fork Watershed, (5) Big Creek  
20 Watershed, and (6) Moon Creek Watershed. These watersheds contains a number of abandoned  
21 mine workings (mine adits), waste rock piles, mill tailings, and areas of contaminated floodplain.  
22 Each of these areas is a source of soluble metals and sediments containing lead that eventually  
23 migrate into the Coeur d'Alene River system. There are also areas of contaminated groundwater  
24 that seep into surface waters at lower elevations. Abandoned mill tailings piles and mine and mill  
25 structures are present in the watersheds.

1 Generally the remedial approach consists of moving mine waste materials out of the floodplain  
2 and out of the creek channels, to the extent possible, consolidating materials, and providing a cap  
3 and vegetation to prevent/minimize surface waters from contacting the metal-bearing wastes.  
4 Seepages from mine workings would be collected and either treated passively or in an active,  
5 centralized facility. In some circumstances contaminated groundwater would be extracted and  
6 treated. Some sediments in the floodplains would be excavated and transported to a local or  
7 regional repository. Banks along some portions of the creeks would require bioengineering work  
8 to prevent removal of contaminated materials from the banks and transport into surface water,  
9 especially during high flow events such as spring runoff.

10 Important sources in each watershed have been identified in the Final Feasibility Study, and  
11 preliminary costs have been developed for each source area. The URS June 2007 Cost Update  
12 tabulates costs for each of these areas.<sup>15</sup> I use these costs as a basis for my future projection,  
13 removing costs for activities completed prior to January 2007.

14 The calculated present values of the future remediation of the Upper Basin is approximately  
15 **\$681 million** in year 2008 dollars. See Tables D-3 and Table D-5 in Appendix D for more  
16 information.

## 17 **LOWER BASIN**

18 The Lower Basin consists of the Coeur d'Alene River channel between the confluence of the  
19 North and South Forks near Enaville and Coeur d'Alene Lake at Harrison. Five remedial  
20 categories in the Lower Basin are described in the Final Feasibility Study: (1) river banks and  
21 levees, (2) sediments beds along the Lower Coeur d'Alene River Basin, (3) wetlands and  
22 floodplains, (4) sediments in the Lateral Lakes, and (5) delta sediments.<sup>16</sup> EPA evaluated six  
23 remedial alternatives in the Final Feasibility Study and the ROD. Alternative 3 of the Final  
24 Feasibility Study served as the basis for the development of EPA's comprehensive remedy.

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<sup>15</sup> URS June 2007 Cost Update, Tables 9-14.

<sup>16</sup> Final Feasibility Study Report, Part 3, Ecological Alternatives, October 2001, pp. 6-1 to 6-8.

1 Contamination has occurred in the lateral lakes and the floodplains of the Lower Basin by the  
2 transport of metal-bearing mining wastes from the mining areas in the Upper Coeur d'Alene  
3 Basin. In its comprehensive plan to complete the remediation of the Lower Basin, EPA will begin  
4 its activities in the Lateral Lake Region in 2013 with engineering design and pilot operations to  
5 develop and refine excavation, disposal, and revegetation procedures. This development phase  
6 will continue for about five years (until about 2017). Full scale operations will continue for  
7 fifteen years from 2018 through 2032.

8 Remediation of the river banks and levees, the sediments in the river and the delta below Harrison  
9 would commence with engineering design and pilot work in years 2018 to 2022. Construction  
10 activities will start in year 2023 and continue for twenty five years, ending in year 2047. The  
11 schedule for the Lower Basin remediation is purposely delayed to permit the completion of a  
12 significant amount of remedial work in the Upper Basin, the original source of the lead-bearing  
13 sediments now present in the river banks and levees, the river channel, the lateral lakes, the  
14 floodplains, and the river delta below Harrison.<sup>17</sup>

15 I have calculated the present value of the remedial costs for the Lower Basin at approximately  
16 **\$597 million** in year 2008 dollars. See Tables D-3 and Table D-6 in Appendix D for more  
17 information.

## 18 **SPOKANE RIVER**

19 Another consequence of the mining for precious metals, lead and zinc over more than one hundred  
20 years has been the transport of lead-bearing sediments beyond Coeur d'Alene Lake and into the  
21 Spokane River. Some of these sediments have deposited along the shoreline of the River between  
22 Coeur d'Alene Lake and the City of Spokane. A number of areas along the river in the State of

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<sup>17</sup> See Table 8 in the URS June 2007 Cost Update for cost estimates I use in my calculations as well as descriptions of work areas.

Washington have been contaminated with arsenic, cadmium, copper, lead and zinc in soils and sediments.<sup>18</sup>

In the Final Feasibility Study<sup>19</sup> and the ROD, EPA studied two scenarios for potential future remediation: (1) a Lower Range, and (2) an Upper Range.<sup>20</sup> Since the ROD was issued, one of the eleven identified areas has been remediated; I have adjusted the future costs to compensate for completed remedial work. Current plans are to remediate the remaining areas in the four years from 2007 to 2010.<sup>21</sup>

Based on the initial remedial project, EPA believes that it is highly likely that the remedial costs for the Spokane River will result in the Upper Range of costs as compared to the Lower Range. The calculated present value for the Upper Range is approximately **\$15.6 million** in year 2008 dollars. See Tables D-3 and Table D-7 in Appendix D for more information.

## LAKE MANAGEMENT PLAN

EPA did not select a clean-up action for Coeur d'Alene Lake. State, tribal, federal, and local governments are in the process of implementing a Lake Management Plan.

Historically EPA has not had a direct role in the Lake Management Plan. However, EPA believes that there is a 10 percent probability that the EPA may be required to take responsibility for the Lake Management Plan in the future (assumed to be year 2030, or the first five-year review after completion after the work in the Upper Basin) and potential remedial responsibilities in the Lake.<sup>22</sup> I have calculated the future costs for managing the Lake Plan; the present value is

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<sup>18</sup> ROD, OU 3, September 12, 2002, pp. 5-9, 5-10.

<sup>19</sup> Final Feasibility Study, pp 1-30 to 1-32.

<sup>20</sup> ROD, OU 3, September 12, 2002, Table 12.4-2, pp. 12-136, 137.

<sup>21</sup> Report of Cami Grandinetti, June 15, 2007.

<sup>22</sup> I base my estimate on information presented in Final Feasibility Study Report, Part 3, Ecological Alternatives, p. 8-20. Since the overall value of this Program is small relative to over remedial work, I have  
(continued...)

1 approximately **\$1.4 million** in year 2008 dollars. See Table D-3 in Appendix D for more  
2 information.

### 3 **SITE-WIDE COSTS AT THE COEUR D'ALENE SUPERFUND SITE**

4 There are several cost components that occur on a site-wide basis, including five-year reviews,  
5 institutional controls, EPA and state oversight, and EPA indirect costs. See Table D-3 in Appendix  
6 D for more information about this site-wide costs.

#### 7 **Five-Year Reviews**

8 EPA will continue to be responsible for conducting five-year reviews indefinitely at a cost of \$1.5  
9 million each, in 2007 dollars.<sup>23</sup> The present value is approximately **\$11.5 million** in year 2008  
10 dollars.

#### 11 **Institutional Controls Costs**

12 Institutional Program costs are included in the Human Health Program. At this time the EPA  
13 does not believe additional controls are necessary but circumstances may arise in the future  
14 requiring more action and intervention.

#### 15 **EPA And State Oversight Costs**

16 The EPA Region 10 has determined that their oversight costs represent about 2.3 percent of all  
17 contractor costs.<sup>24</sup> In addition, the States of Idaho and Washington, tribes, and other entities who  
18 work in collaboration with EPA represent another 2.3 percent of oversight costs. Accordingly,

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<sup>22</sup> (...continued)  
only calculated the expected value due to the probability of EPA implementing the program.

<sup>23</sup> See file "04\_2007-04-09\_Itemized\_Cost\_Summary\_Five\_Year\_Review.pdf," Bates Number 2EPASE000015, for the basis for this estimate.

<sup>24</sup> EPA based this estimate on historical costs. See file pic26031.jpg.

1 I have calculated 4.6 percent of all contractor, construction, and O&M costs to determine the total  
2 oversight costs over the 100-year program.<sup>25</sup> The present value for all oversight is **\$67.6 million**  
3 in year 2008 dollars.

#### 4 **EPA Indirect Costs**

5 The EPA also incurs indirect costs, which are calculated and allocated by Region. The projected  
6 indirect cost rate for EPA Region 10 is 33.49 percent.<sup>26</sup> This rate is applied to all future costs.  
7 The EPA indirect costs based on the combined cashflow of all other activities total **\$515 million**  
8 in year 2008 dollars.

#### 9 **PAST AND FUTURE COSTS FOR OTHER PARTIES TO THE CLAIM**

10 The UDSOJ has asked me to combine past and future cost estimates prepared by other experts  
11 providing testimony in this matter for the purpose of removing possible double counting of costs.  
12 For example, one expert has provided a summary of past costs expended by federal agencies  
13 through March 31, 2007. Since my forecast starts on January 1, 2007, I subtract the past costs  
14 incurred from January 1, 2007 through March 31, 2007, from my future cost estimate. In addition,  
15 I can then put forth a total number for the claim in this report.

16 The other claims include total past costs for federal agencies (\$158,937,009 – see the Expert  
17 Report of Wiley Wright), and the USDOJ (\$21,081,921 – see the Expert Report of  
18 William M. Kime); and future costs for the USDOJ (\$1,151,505 – see the Expert Report of  
19 William M. Kime) and NRD (\$304.0 to \$839.5 million in year 2004 dollars – see the Expert  
20 Report of Joshua Lipton). After removing past costs that overlap with my future cost estimate,

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<sup>25</sup> Personal communication with EPA officials.

<sup>26</sup> Expert Report of Thomas De Hoff, May 2, 2007, p.13.

the total costs presented by other experts range from **\$481.4 million to \$1.017 billion** depending the selected NRD alternative.<sup>27</sup>

See Table D-8 in Appendix D for a detailed calculation.

## CONCLUSIONS

The present value of the total future remedial costs at the Coeur d’Alene Site, Operable Unit 3, is calculated at **\$2,053,677,560** dollars in 2008 dollars as of June 30, 2008. Individual elements are summarized in Table 1.

The total of all past and future claims put forth by other experts working on behalf of the USDOJ ranges from **\$2.536 to \$3.071 billion**, with prejudgment interest calculations to be unified at the time of trial.

**Table 1. Summary Of Estimated Present Values  
For Future Remedial Activities in OU 3**

	Item	Present Value (in 2008 dollars)
1	Human Health	\$164,263,090
2	Upper Basin	\$681,169,073
3	Lower Basin	\$596,856,353
4	Spokane river	\$15,618,610
5	Lake Management Plan	\$1,431,713
6	Five Year Reviews	\$11,455,130
7	EPA Oversight	\$33,828,261
8	EPA/State/Tribe Consulting/Etc.	\$33,828,261
9	EPA Indirects	\$515,227,069
10	Total	\$2,053,677,560

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<sup>27</sup> I have not attempted to revise the prejudgment interest calculations. I understand that prejudgment interest will be updated to the date of payout on the claim.

## **APPENDIX A**

### **Resume of Paul R. Ammann**



Paul R. Ammann is an expert in the development, costs, and applications of engineering technologies. In positions within major companies and as a consultant, he has been responsible for the conceptualization, design, testing, and implementation of technologies involving pollution control, hazardous waste handling and remediation, metallurgical processes, and chemical processes. As a consultant, he has focused much of his work in the environmental area. A primary focus of that work has been the analysis of policies, technologies, and costs associated with the cleanup of hazardous waste sites. He has helped companies structure research and development efforts. He has helped policymakers assess the cost implications of various regulatory scenarios. He has also worked with companies, their legal counsel, and legal committees in connection with settlement and litigation matters at Superfund sites.

Mr. Ammann was a founder and Principal of *The Brattle Group*. Prior to that, he held consulting positions at Putnam, Hayes & Bartlett and Charles River Associates, where he directed a major study for the EPA to assess the impact of proposed RCRA regulations on the U.S. mining industry. This study included the estimation of the costs for the containment of existing and future wastes, (including closure and post-closure maintenance), and the management, treatment and disposal of aqueous wastes. Before consulting, Mr. Ammann worked as Director of Process Technology for Kennecott Corporation, and held engineering and management positions at Avco Corporation, Union Carbide Nuclear Company, and Stone & Webster Engineering Corporation.

#### **EDUCATION**

M.S. Chemical Engineering, M.I.T., 1958

B.S. Chemical Engineering, M.I.T., 1957

Completed course work and passed the Qualifying Examination for the Sc.D. degree.

Attended the Harvard Business School, IRI Program on the Management of Research.

**REGISTERED PROFESSIONAL CHEMICAL ENGINEER**, Massachusetts

#### **PROFESSIONAL ACTIVITIES**

American Institute of Chemical Engineers

American Institute of Mining and Metallurgical Engineers

American Chemical Society

Hazardous Materials Control Research Institute

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**SELECTED PUBLICATIONS AND PRESENTATIONS**

“Using Decision Analysis to Manage Environmental Costs” with Gayle S. Koch and Kenneth T. Wise. *Journal of Environmental Regulation*, Vol. 4, No. 4, Summer 1995.

“The Best Approach To Environmental Compliance: It makes more sense to be proactive than reactive” with Gayle S. Koch, M. Alexis Maniatis, and Kenneth T. Wise. *Engineering Practice, Chemical Engineering*, Vol. 102, No. 2, February, 1995.

“Current Trends in Federal and State Regulation of Hazardous Air Pollutants,” with Gayle S. Koch. *Journal of Environmental Regulation*, Vol. 4, No. 1, Autumn 1994.

“Filling the GAAP: An Approach to Improve SEC Disclosure of Environmental Liabilities” with Kenneth T. Wise, M. Alexis Maniatis, and Gayle S. Koch. *Journal of Environmental Law & Practice*, September/October 1994.

“Pollution Control Strategies” with Gayle S. Koch, M. Alexis Maniatis, and Kenneth T. Wise. Presented at the 1994 Annual Meeting of the Air & Waste Management Association. Cincinnati, OH. June 19-24, 1994.

“Economic Analysis in Environmental R&D” with Norman Z. Shilling. Presented at the 1994 Annual Meeting of the Air & Waste Management Association. Cincinnati, OH. June 19-24, 1994.

“Using Decision Analysis to Manage Environmental Costs” with Gayle S. Koch and Kenneth T. Wise. Presented at the 1994 Annual Meeting of the Air & Waste Management Association. Cincinnati, OH. June 19-24, 1994.

“Managing Environmental Liabilities at Manufactured Gas Sites” with Gayle S. Koch and A. Lawrence Kolbe. Presented at the 56th Annual Meeting of the American Power Conference: Putting Technology To Work. Chicago, IL. April 25-27, 1994.

“Technical and Economic Analyses in the Development of Bioremediation Processes” with Gayle S. Koch. Presented at Second International Symposium on *In-Situ* and Onsite Bioreclamation. San Diego, CA. April 5-8, 1993. Also; published in *Remediation*, Winter 1993/94.

“Estimating Contingent Environmental Liabilities: An Approach to Achieve SEC Compliance” with Kenneth T. Wise, M. Alexis Maniatis, and Gayle S. Koch. *Toxics Law Reporter*, December 1993.

“Evaluating the Competitiveness of Emerging Hazardous Waste Management Technologies” with Gayle S. Koch. Presented at The American Chemical Society Conference: Emerging Technologies in Hazardous Waste Management. Atlanta, GA. September 27-29, 1993.

“Evaluating Environmental Costs—Accounting for Uncertainties” with Gayle S. Koch and Kenneth T. Wise. *Chemical Waste Litigation Reporter*, February 1994.

“EPA’s ‘BEN’ Model: Challenging Excessive Penalty Calculations” with Kenneth T. Wise, A. Lawrence Kolbe, and Scott M. DuBoff. *Toxics Law Reporter*, May 1992.

#### **TESTIMONY**

Expert Report on behalf of Kerr-McGee in the matter of *Kerr-McGee Chemical LLC vs. The United States of America*, in United States District Court for District of Columbia, Case No. 1:00CV01285 EGS, May 2004.

Expert Report on behalf of plaintiffs concerning the source of contamination in a commercial gas stream in the matter of *Messer Griesheim Industries, Inc. Vs. Cryotech of Kingsport, Inc., Eastman Chemical Company, and Mellon Financial Services Corporation*, in the Circuit Court for Knox County, Tennessee.

Expert Report on behalf of defendants “Regarding Economic Benefit of Alleged Noncompliance - November 10, 2003” in *United States of America et al. V. AK Steel Corporation*, Civil Action No. C-1-00530, in United States District Court, Southern District of Ohio.

Testimony on behalf of defendants concerning allocation issues in *Browning-Ferris Industries of Illinois, Inc., et al. v. Richard Ter Maat, et al.*, Civil Action No. 92-C-20259 in the United States District Court for the Northern District of Illinois, Western Division. (Depositions taken; Expert Report for Trial and Testimony in Trial.)

Testimony on behalf of Dean Foods concerning the economic benefit associated with delayed compliance at its Belleville, PA, facility. *U.S. v. Fairmont*, Civil Action No. 1:CV-94-0621.

Deposition on behalf of defendant in a cost recovery action by the United States of America, Plaintiff, April 1994.

Expert Report for a petroleum refining company on compliance costs in an EPA noncompliance penalty matter, September 1994.

Deposition on behalf of Unocal in *Graybill Terminal Company, et al., Plaintiffs, v. Union Oil Company of California aka Unocal, et al.*, Case No. 92-238K (LSP), regarding an analysis of claims for past costs by plaintiffs, November 1993.

Expert Report for a western mining company on compliance costs in a Region 9 EPA noncompliance penalty action; participated in settlement discussions at EPA headquarters, July 1993.

Expert Report and Deposition on behalf of defendant in *Public Interest Research Group of New Jersey, Inc., et al., Plaintiffs, and New Jersey Department of Environmental Protection and Energy, Plaintiff-Intervenor, v. Circuit Foil USA, Inc., Defendant*, Civil No. 89-5371, regarding estimated costs for compliance with the NPDES permit, June 1993.

Expert Report for a manufacturing company on compliance costs in an Ohio noncompliance penalty action, March 1993 and June 1993.

Expert Report for a chemical manufacturing company on compliance costs in a Region 1 EPA noncompliance penalty action, 1993.

Expert Report for a metals production company on compliance costs and preparations for trial in Texas, 1993.

Expert Report on compliance costs for a western mining company in a state noncompliance penalty action, August 1992.

Deposition on behalf of Third Party Defendants in *United States v. Hardage Steering Committee; Hardage Steering Committee v. Third Party Defendants*, Civ.-86-1401-W, regarding the assessment of economic benefits, December 1990 and January 1991.

## **APPENDIX B**

### **Documents Considered by Paul R. Ammann**

## APPENDIX B

### Documents Considered by Paul Amman

<b>Title</b>	<b>Author</b>	<b>Date</b>
Region 10 Superfund: Bunker Hill / Coeur d'Alene Basin	EPA Region 10	N/A
FY02-FY04 Clean Water Act Grants - Excerpts from Coeur D'Alene Tasks in Annual Work Plans - 2EPASE001123 - 2EPASE001130	Unknown	N/A
Estimated Total Party Hours - July - June - 2EPASE001131 - 2EPASE001144	Unknown	N/A
Region 10 Indirect Cost Rates - 2EPASE001222 - 2EPASE001223	Unknown	N/A
Historical Costs Used to Determine EPA Percentage [Electronic File Name: pic26031]	Unknown	N/A
Bunker Hill/Coeur d'Alene Superfund Project - Analytical Tools to Assess Benefits of Cleanup Alternatives on Surface Water Quality in the Future - Strawman Concept and Proposal - 2EPSEA001443 - 2ESPEA001450	Unknown	N/A
River Segment Loading - 2ESPEA001451 - 2ESPEA001451	Unknown	N/A
CH2M Hill Report	CH2M Hill	2001/2002
Bunker Hill Consent Decree (1994 Upstream Mining Consent Decree) - 2EPASE000656 - 2EPASE000836	US DOJ	02/11/1994
Coeur d'Alene Lake Management Plan - 2EPASE000838 - 2EPASE001122	Coeur d'Alene Tribe Clean Lakes Coordinating Council Idaho Division of Environmental Quality	10/00/1996
Review of Proposed Superfund Indirect Rates Methodology	KPMG	09/00/1999
GAO Review of EPA Superfund Indirect Cost Accounting Methodology	Calbom, Linda / GAO	12/22/1999
Draft - Technical Memorandum No. 1 Candidate Alternatives and Typical Conceptual Designs - Coeur d'Alene River Basin Feasibility Study - 2ESPEA001452 - 2ESPEA001748	URS Greiner CH2M Hill	02/00/2000

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### Documents Considered by Paul Amman

<b>Title</b>	<b>Author</b>	<b>Date</b>
Accounting for Indirect Costs Associated with Superfund Site-Specific Activities	Dillon, Joseph / EPA	05/26/2000
Basin Draft Tech Memo 3	URS	07/06/2000
First Five Year Review of the Non-Populated Area Operable Unit Bunker Hill Mining and Metallurgical Complex - 2EPASE001274 - 2EPASE001442	USEPA Region 10	09/28/2000
United States Motion for Temporary Restraining Order and Memorandum in Support	DOJ	08/09/2002
ROD - Responsiveness Summary	URS/EPA	09/00/2002
ROD/R10-02/032 2002 OU 03	EPA	09/12/2002
BHISS ICP Cost Estimate	McCurdy, Michael / TerraGraphics	11/01/2002
ICP Cost Estimate – General ICP Breakout from November 1, 2002 Estimate	McCurdy, Michael / TerraGraphics	11/13/2002
Declaration of Robert Hanson	Hanson, Robert / Idaho Department of Environmental Quality	04/25/2003
Superfund Lead-Contaminated Residential Sites Handbook	EPA	08/00/2003
Expert Report of Bradford S. Cushing - DFEXRPT000356 - DFEXRPT000384	Cushing, Bradford / Applied Environmental Management	08/00/2004
Federal Lands Damage Calculations	Stratus Consulting Inter-Fluve Inc.	08/20/2004
Summary of Damages Calculations: Coeur d'Alene Basin - Natural Resource Damage Assessment - Summary Report	Stratus Consulting	08/20/2004
RestorePlan	Ridolfi Inc. Falter, Michael / Aquatic Environmental	08/20/2004
AquaticCalc	Stratus Consulting Inter-Fluve Inc. Rahel, Frank / U. Wyoming	08/20/2004
Tundra Swan Injury Assessment - Lower Coeur d'Alene Basin	Trost, Robert	08/23/2004

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### Documents Considered by Paul Amman

<b>Title</b>	<b>Author</b>	<b>Date</b>
Expert Opinion of John C. Butler, III - DFEXRPT000054 - DFEXRPT000354	Butler, John / LECG	08/24/2004
Expert Report of Steven Werner - DFEXRPT000877 - DFEXRPT001017	Werner, Steven / NewFields Boulder	08/24/2004
Rebuttal Report of Bradford S. Cushing - DFEXRPT001450 - DFEXRPT001460	Cushing, Bradford / Applied Environmental Management	09/00/2004
Superfund Actual Indirect Cost Rates for Fiscal Years (FY) 2002 and 2003 - 2EPASE000008 - 2EPASE000012	McAllister, Lorna	09/01/2004
LeJeune_Rebuttal092304	LeJeune, Katherine / Stratus Consulting	09/23/2004
Supplemental Expert Opinion of John C. Butler, III - DFEXRPT001185 - DFEXRPT001449	Butler, John / LECG	09/24/2004
Rebuttal Report of Steven Werner - DFEXRPT001589 - DFEXRPT001608	Werner, Steven / NewFields Boulder	09/24/2004
TROST_TundraExpertReport101304	Trost, Robert / US Fish & Wildlife Kern, John / Kern Statistical Services	10/13/2004
Lipton_Rebuttal101504	Lipton, Joshua / Stratus Consulting	10/15/2004
LeJeune_Rebuttal101504	LeJeune, Katherine / Stratus Consulting	10/15/2004
Rahel_Rebuttal101504	Rahel, Frank / U Wyoming	10/15/2004
Koonce_Rebuttal101504	Koonce, Greg / Inter-Fluve	10/15/2004
Ridolfi101504	Ridolfi Inc.	10/15/2004
Chapman_Rebuttal101504	Chapman, David / Stratus Consulting	10/15/2004
Lipton_Supplemental110904	Lipton, Joshua / Stratus Consulting LeJeune, Katherine / Stratus Chapman, David / Stratus	11/09/2004
Baseline and Historic Depositional Rates and Lead Concentrations, Floodplain Sediments, Lower Coeur d'Alene River, Idaho	Bookstroh, Arthur / USGS	12/11/2004



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### Documents Considered by Paul Amman

<b>Title</b>	<b>Author</b>	<b>Date</b>
Executive Summary - Coeur d'Alene River Wildlife Management Area - Public Use Survey - 2004-2005 - 2EPASE001145 - 2EPASE001156	Unknown	00/00/2005
Lessons from the Coeur d'Alene River Basin	National Academies of Sciences	00/00/2005
Brattle Group Model Expert Report	DeHoff, Thomas / EPA	06/00/2005
Second Five-Year Review Report For the Bunker Hill Mining and Metallurgical Complex Superfund Site - 2EPASE000036 - 2EPASE000655	US EPA	10/24/2005
EPA Project Report - 01-November-2005 through 01-December-2005 - 2EPASE000031 - 2EPASE000035	US Army Corps of Engineers, Seattle District	12/19/2005
Supplemental Proof of Claim of the United States on Behalf of the United States Department of the Interior and the Department of Agriculture, the Against Asarco, LLC	DOJ	07/28/2006
Supplemental Proof of Claim of the United States on Behalf of the United States Environmental Protection Agency, the Department of Agriculture, the Department of the Interior, and the United States Section of the International Boundary and Water Commission Against Asarco, LLC	DOJ	07/28/2006
Scorpions - Superfund Total Cost Report - 2EPASE000007 - 2EPASE000007	Unknown	10/23/2006
Application for Authorization to Hire LECG, LLC as Environmental Consultant to the Debtor	Baker Botts Jordan Hyden	11/15/2006
Final Field Report, Washington Recreation Sites, Starr Road, Appendix 3 and USAC Costs - 2EPASE001224 - 2EPASE001248	Waste Management, Inc.	11/16/2006
Estimated Cleanup Costs for the Coeur d'Alene Basin Costs Escalated to November 2006 and Ninemile Creek and Pine Creek Costs Excluded	URS	11/17/2006

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### Documents Considered by Paul Amman

<b>Title</b>	<b>Author</b>	<b>Date</b>
Superfund Actual Indirect Cost Rates for FY 2004	EPA	01/31/2007
FY 1990 - 2004 Actual Indirect Cost Rates	EPA	01/31/2007
Contract cost docs ASW 2006	Whyms, Kelvin / EPA	02/23/2007
Contract cost docs ER 2005	Whyms, Kelvin	02/23/2007
Case Management Order Establishing Procedures for Estimation of Asarco LLC's Environmental Liabilities and Authorizing the Filing of Omnibus Objections to Environmental Claims	Schmidt, Richard / US Bankruptcy Judge	03/23/2007
U.S. v. Asarco, Inc. Summary of Costs Incurred by the Department of Justice/Environment and Natural Resources Division [Electronic File Name: 128L at1206 and 307]	DOJ	03/31/2007
Costs per [Electronic File Name: US v. Asarco - Summary 061507]	Wright, Wiley / Rubino & McGeehin Consulting	03/31/2007
Final Field Report, Washington Recreation Sites, Starr Road - 2EPASE001249 - 2EPASE001273	US Army Corps of Engineers, Seattle District	04/00/2007
Itemized Cost Summary - Coeur d'Alene - Five Year Review - 2EPASE000016 - 2EPASE000030	Unknown	04/09/2007
Itemized Cost Summary - Coeur d'Alene - 2EPASE000013 - 2EPASE000015	Unknown	04/09/2007
Update on General Annual ACP Cost for the Box. - 2EPASE001771 - 2EPASE001772	McCurdy, Michael / TerraGraphics	04/13/2007
Box ICP Annual Estimate - 2EPASE000837 - 2EPASE000837	Unknown	04/14/2007
ICP Cost Update - 2EPASE001773 - 2EPASE001773	Unknown	04/16/2007
Construction/Index Cost Index History	Unknown	04/19/2007
Follow-up Information for Brattle - Coeur d'Alene Basin - 2EPASE000001 - 2EPASE000006	Unknown	04/27/2007

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### Documents Considered by Paul Amman

<b>Title</b>	<b>Author</b>	<b>Date</b>
Coeur d'Alene Lake Monitoring Program - Quality Assurance Management Plan - 2EPASE001157 - 2EPASE001221	Coeur d'Alene Tribe Idaho Division of Environmental Quality	05/08/2007
Official Environmental Estimation Service List - Case Management Order Exhibit B - Effective April 24, 2007	United States Bankruptcy Court for the Southern District of Texas Corpus Christi Division	05/15/2007
Coeur d'Alene Basin RD/RA - Response Costs from 09/01/2003 through 12/31/2006 with Interest from 03/22/1996 through 12/31/2006 - 2EPSEC001496 - 2EPSEC002337	EPA	05/25/2007
CD'A BSN-Frisco Mine/Mill Shoshone County - Response Costs from 01/01/2007 through 03/31/2007 with Interest from 03/22/1996 through 03/31/2007 - 2EPSEC002338 - 2EPSEC002346	EPA	05/25/2007
CD'A BSN-Frisco Mine/Mill Shoshone County - Response Costs from 09/01/2003 through 12/31/2006 with Interest from 03/22/1996 through 12/31/2006 - 2EPSEC002347 - 2EPSEC002354	EPA	05/25/2007
CD'A BSN - Osburn Site Shoshone County - Response Costs from 01/01/2007 through 03/31/2007 with Interest from 03/22/1996 through 03/31/2007 - 2EPSEC002355 - 2EPSEC002363	EPA	05/25/2007
CD'A BSN - Osburn Site Shoshone County - Response Costs from 09/01/2003 through 12/31/2006 with Interest from 03/22/1996 through 12/31/2006 - 2EPSEC002364 - 2EPSEC002373	EPA	05/25/2007
Coeur d'Alene Basin RD/RA - Response Costs from 01/01/2007 through 03/31/2007 with Interest from 03/22/1996 through 03/31/2007 - 2EPSEC001413 - 2EPSEC001495	EPA	05/25/2007

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### Documents Considered by Paul Amman

<b>Title</b>	<b>Author</b>	<b>Date</b>
CD'A Basin - Yard RMVL, Wallace/Osborn ID Site ID = 10 4Q - Response Costs from 09/01/2003 through 12/31/2006 with Interest from 03/22/1996 through 12/31/2006 - 2EPSEC002383 - 2EPSEC002402	EPA	05/25/2007
CD'A Basin - Dayrock Mine, Wallace ID. Site ID = 10 7H - Response Costs from 01/01/2007 through 03/31/2007 with Interest from 03/22/1996 through 03/31/2007 - 2EPSEC002403 - 2EPSEC002411	EPA	05/25/2007
CD'A Basin - Dayrock Mine, Wallace ID. Site ID = 10 7H - Response Costs from 09/01/2003 through 12/31/2006 with Interest from 03/22/1996 through 12/31/2007 - 2EPSEC002412 - 2EPSEC002421	EPA	05/25/2007
CD'A Basin, Kootenai County, ID. Site ID = 10 M6 - Response Costs from 01/01/2007 through 03/31/2007 with Interest from 03/22/1996 through 03/31/2007 - 2EPSEC002422 - 2EPSEC002431	EPA	05/25/2007
CD'A Basin, Kootenai County, ID. Site ID = 10 M6 - Response Costs from 09/01/2003 through 12/31/2006 with Interest from 03/22/1996 through 12/31/2006 - 2EPSEC002432 - 2EPSEC002450	EPA	05/25/2007
Coeur d'Alene Success Mine, Wallace, ID - Site ID = 10 S7 - Response Costs from 01/01/2007 through 03/31/2007 with Interest from 03/22/1996 through 03/31/2007 - 2EPSEC002451 - 2EPSEC002459	EPA	05/25/2007
Coeur d'Alene Success Mine, Wallace, ID - Site ID = 10 S7 - Response Costs from 09/01/2003 through 12/31/2006 with Interest from 03/22/1996 through 12/31/2006 - 2EPSEC002460 - 2EPSEC002469	EPA	05/25/2007
CD'A Basin - Yard RMVL, Wallace/Osborn ID Site ID = 10 4Q - Response Costs from 01/01/2007 through 03/31/2007 with Interest from 03/22/1996 through 03/31/2007 - 2EPSEC002374 - 2EPSEC002382	EPA	05/25/2007

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### Documents Considered by Paul Amman

<b>Title</b>	<b>Author</b>	<b>Date</b>
Declaration of Anne L. McCauley with Regard to the Bunker Hill Mining and Metallurgical Complex Superfund Site [Electronic File Name: mccauley]	McCauley, Anne / EPA	06/00/2007
Page Repository Expansion Cost Sensitivity Analysis - 2EPASE001768 - 2EPASE001770	Forseth , Derek / TerraGraphics McCracken, Dan / TerraGraphics	06/01/2007
Summary of Page Repository Expansion Cost - 2EPASE001752 - 2EPASE001767	Forseth , Derek / TerraGraphics McCracken, Dan / TerraGraphics	06/01/2007
Estimated Cleanup Costs for the Coeur d'Alene Basin Costs Escalated to December 2006 and Pine Creek Costs Excluded Draft as of June 8, 2007 [Electronic File Name: CdA cost update memo 6-8-07] 2EPASE001774 - 2EPASE001842	URS	06/08/2007
Expert Report of William M. Kime Concerning Certain Costs o the U.S. Department of Justice Environment and Natural Resources Division [Electronic File Name: Final Report61207]	Kime, William / Rubino & McGeekin Consulting	06/12/2007
Declaration of Robert Hanson with Regard to the Bunker Hill Mining and Metallurgical Complex Superfund Site [Electronic File Name: #963594-v1-ddsubDocument6142007]	Hanson, Robert / Idaho Department of Environmental Quality	06/14/2007

## **APPENDIX C**

### **Expert Report Of M. Alexis Maniatis**

**EXPERT REPORT  
CONCERNING ESTIMATION OF THE PRESENT VALUE  
OF EXPECTED REMEDIATION COSTS  
IN THE ASARCO LLC CHAPTER 11 BANKRUPTCY MATTER  
CASE No. 05-21207**

*Prepared by*



M. Alexis Maniatis  
Principal

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May 4, 2007

## INTRODUCTION

My name is M. Alexis Maniatis. I am a Principal and President of *The Brattle Group*, an economic and management consulting firm with offices in Washington, DC, Cambridge, Massachusetts, San Francisco, Brussels, and London. I hold a bachelor's degree in economics from Wesleyan University and an MBA from Yale University.

Since joining *The Brattle Group* in 1991, I have worked on a wide range of engagements on behalf of corporations, government agencies, and law firms worldwide. I have expertise in finance and economics with a focus on questions that arise in valuation, the estimation of economic damages, including in environmental matters, and regulation. Throughout my career I have worked closely on consulting engagements, including the estimation of damages, with two of the world's leading experts in economics and finance Professors Daniel McFadden and Stewart Myers, both of whom are Principals of *The Brattle Group*. Professor Myers is co-author of the world's best-selling textbook in corporate finance: *Principles of Corporate Finance* (known informally as "Brealey and Myers"), and Professor McFadden is the recipient of the 2000 Nobel Prize in Economics.

I have testified as an expert on economic damages in U.S. federal and state courts, and before commercial and international arbitration panels. I also have advised corporations on finance issues. My experience is described in greater detail in Appendix A.

## ASSIGNMENT

I understand that experts acting on behalf of U.S. Department of Justice (USDOJ) have estimated the expected costs necessary to remediate certain environmental harm for which ASARCO is liable. These costs are estimated in nominal dollars, that is, in the dollar amounts that are expected to be spent in each year, including the effects of inflation. Although these environmental remediation costs will be expended over a period of years, a single amount to fund these costs must be established by a finding of the Court to resolve the government's claims in the ASARCO bankruptcy. My analysis assumes that any such finding would be made in approximately



1 mid-2008. Thus, future costs incurred after June 30, 2008 must be discounted to a present valued  
2 as of that date. Similarly, amounts incurred before the June 30, 2008 valuation date must  
3 incorporate interest to that date.

4  
5 Specifically, I have been asked by the USDOJ to determine the annual discount factors and the  
6 interest rate to be applied to the estimated remediation costs to establish a single present value  
7 amount that would have to be paid to the Environmental Protection Agency's (EPA's) Hazardous  
8 Substance Superfund Trust Fund (the Superfund Trust Fund) today to fund these costs over  
9 approximately the next century. Because future costs are estimated on an annual basis, my  
10 analysis also estimates the present value at the mid-point, July 1<sup>st</sup>, of each year between 2008 and  
11 2108. Although expected future costs to be incurred by other agencies of the U.S. Government,  
12 such as the Department of the Interior and the U.S.D.A. Forest Service, are not funded from the  
13 Superfund Trust Fund, they can be reduced to a present value using the same factors as I present  
14 for EPA.<sup>1</sup>

## 15 METHODOLOGY

### 16 Overview

17 I understand that Superfund Trust Fund invests only in non-marketable government securities  
18 whose prices and yields are set to mirror market-based prices, yields, and maturities for traded  
19 U.S. Treasury bills, notes, and bonds.<sup>2</sup> These are sometimes referred to as MK ("market-based")

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<sup>1</sup> I understand, however, that money received and held by the Forest Service is required to be kept in non-interest-bearing accounts.

<sup>2</sup> See, for example, *Treasury Responsibilities in Investment Fund Administration*, Report for the Secretary of the Treasury, November 2000 (available at [http://www.fedinvest.gov/govt/apps/fip/library/library\\_dfitreasrespifa.pdf](http://www.fedinvest.gov/govt/apps/fip/library/library_dfitreasrespifa.pdf); and *Superfund Interest Rates, 1980 to Present* (available at [http://www.epa.gov/ocfopage/finstatement/superfund/int\\_rate.htm](http://www.epa.gov/ocfopage/finstatement/superfund/int_rate.htm)). See also, for example, *Fiscal Year 2006 Annual Report on Performance and Accountability*, U.S. Department of the Interior, November 2006, (available at <http://www.doi.gov/pfm/par/par2006/>).

Treasury securities. I have been asked to assume that the EPA cannot sell the environmental remediation liabilities that must be funded from the Superfund Trust Fund to other parties.<sup>3</sup>

To determine the amount that must be placed into the Superfund Trust Fund in June of 2008 to fund expected future environmental remediation costs, it is necessary to determine the return on the MK Treasury securities in which the fund can invest. These in turn are based on market yields for traded government securities.

Because the Superfund Trust Fund earns income on its holdings of Treasury securities, a dollar of future cost will require less than one dollar to be placed into the Superfund Trust Fund today in order to fund that future cost. The amount that must be placed into the Superfund Trust Fund today will depend on the return that a Treasury security of corresponding duration will earn.

For example, if the yield on a one-year zero-coupon Treasury security is 5 percent, a dollar of

$$\frac{\$1}{1.05} = \$0.95238 \quad (1)$$

future cost in one year's time can be met with the purchase today of securities with a value of \$0.95238. Thus, if \$0.95238 is placed into a fund where it earns an annual return of 5 percent, the resulting amount available to fund remediation costs after one year will be one dollar. For a two-year zero-coupon security with the same annual yield, the corresponding discounted value for two years is \$0.90703.<sup>4</sup> The same exercise can be repeated for periods across the spectrum of government

---

<sup>3</sup> Note that although the liabilities at issue cannot be sold, the discounted present value estimated using Treasury security yields is a reasonable approximation of the market value of these liabilities. The reason is that unlike the *profits* of corporations, which are subject to substantial systematic (or market) risks affected by variability in the volume of product sold, the presence of fixed operating costs, and changes in competitive conditions, the expected remediation costs in this case face only the risk of unanticipated changes in inflation. Compensation for inflation risks, however, is included in the nominal yields of government securities, which face similar risks. Note also that the costs at issue also have less systematic risk than the expected environmental treatment costs of ongoing businesses, whose levels are affected by systematic variability in plant production levels.

<sup>4</sup>

$$\frac{\$1}{(1.05)^2} = \$0.90703$$

1 securities, which are issued presently with maturities as far as thirty years into the future. Figure 1  
 2 illustrates this concept for \$1.00 of future costs in two, five and ten years with an annual return  
 3 of 5 percent.

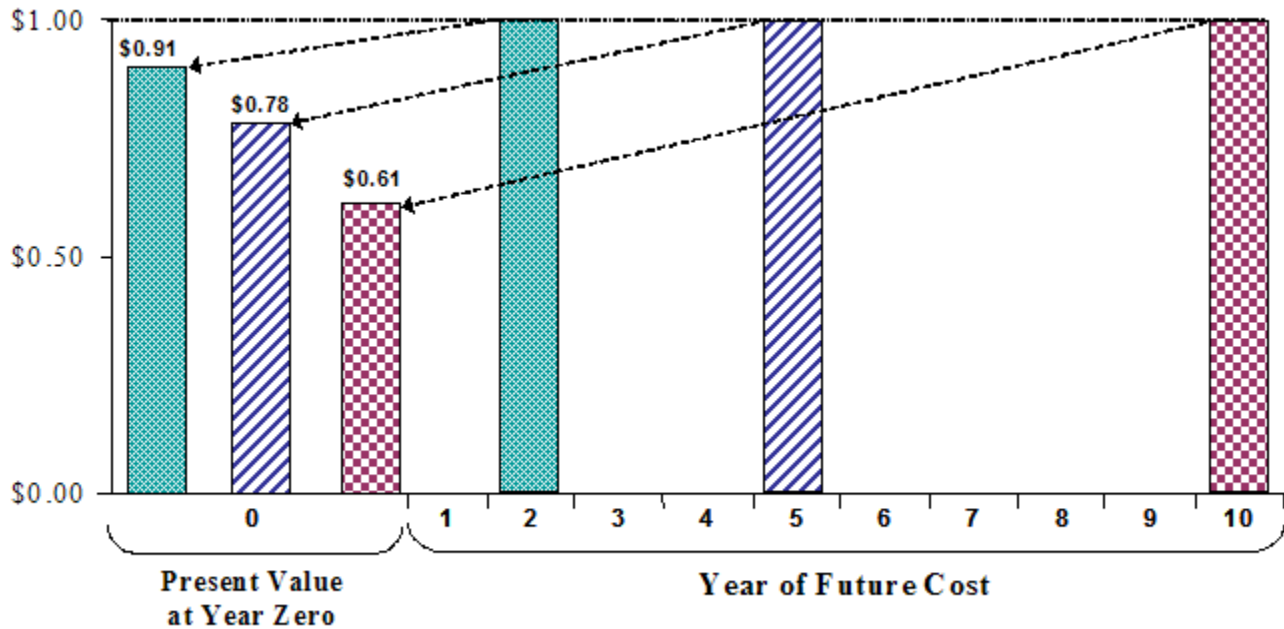


Figure 1: Present Value of \$1 of Future Cost

4 Therefore, to estimate the discounted value of a dollar for each future year or the discount factor,  
 5 I consider the yields on zero-coupon Treasury securities that mature in the corresponding  
 6 period—that is, securities that mature on June 30, 2008 through February 15, 2037, the last maturity  
 7 for which such securities exist. These yields permit estimation of the annual returns from 2008  
 8 to 2036. For periods after 2036, I estimate annual returns based on the yield for securities  
 9 maturing in 2036.

#### Data

10  
 11 Data for zero-coupon Treasury securities as of April 30, 2007 were obtained from Bloomberg L.P.  
 12 and are presented in Appendix B, Table B-1. Zero-coupon Treasury securities include STRIP

1 coupons and STRIP principals.<sup>5</sup> The data provide the CUSIP, the issue date, the maturity, and the  
2 annualized ask yield for each security.

3 Because securities do not generally mature exactly at mid year, the yield for June 30<sup>th</sup> was  
4 estimated based on an interpolation between the yields for closest securities maturing before and  
5 after June 30<sup>th</sup>. The detailed calculations are shown in Appendix B, Tables B-2 and B-3, and  
6 Table 1, below, presents the resulting yields as of April 30, 2007.

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<sup>5</sup> STRIPS is an acronym for Separate Trading of Registered Interest and Principal of Securities. These are U.S. Treasury securities where an intermediary has separated the semi-annual coupon payments from the bond principal repayment to create new zero coupon bonds from each component of the Treasury bond or note. Each of the coupon payments along with the residue are sold separately to investors. Each of these investments then pays a single lump sum at the contract maturity. This method of creating zero-coupon bonds is known as stripping and the contracts are known as STRIPS.

TABLE 1

Maturity	Annualized Yield to Maturity as of April 30, 2007
6/30/2008	4.73%
6/30/2009	4.74%
6/30/2010	4.55%
6/30/2011	4.50%
6/30/2012	4.40%
6/30/2013	4.56%
6/30/2014	4.63%
6/30/2015	4.68%
6/30/2016	4.75%
6/30/2017	4.78%
6/30/2018	4.84%
6/30/2019	4.91%
6/30/2020	4.97%
6/30/2021	5.01%
6/30/2022	5.02%
6/30/2023	5.02%
6/30/2024	5.04%
6/30/2025	5.04%
6/30/2026	5.03%
6/30/2027	5.02%
6/30/2028	4.99%
6/30/2029	4.98%
6/30/2030	4.95%
6/30/2031	4.88%
6/30/2032	4.85%
6/30/2033	4.83%
6/30/2034	4.79%
6/30/2035	4.81%
6/30/2036	4.86%

See Appendix B, Table B-3.

1 Note that the annual yield as of April 30, 2007 for June 30, 2008, 4.73 percent, represents the  
2 annual interest rate needed to bring past costs stated as of April 30, 2007 forward to the valuation  
3 date of June 30, 2008.

4 Because the analysis requires the yields between mid-2008 and the middle of each subsequent  
5 year, it is necessary to break the yield on the Treasury securities into two components; the first is  
6 the yield between the present and mid-2008, and the second (which is the focus of this report) is  
7 the yield from mid-2008 to maturity. This analysis can be performed in a straightforward manner  
8 because we can observe the market yield for securities that mature in mid-2008.

For example, suppose that we observe on February 28, 2007 that the annual yield on a zero-coupon security (call it bond A) maturing on June 30, 2008 is 5 percent and that at the same time the yield on a zero-coupon security (call it bond B) maturing on June 30, 2009 is 6 percent. We can use this information to identify the market-based yield for the period from July 1, 2008 to June 30, 2009, as follows.

The yield on bond B can be thought of as comprised of two distinct components: 1) a return for the 16-month period between March 1, 2007 and June 30, 2008 and 2) a return for the period from July 1, 2008 to June 30, 2009. Moreover, we know the annual yield of the first component because this is equivalent to bond A. Thus:

$$\begin{array}{rcl} & \text{Return on Bond A} & \\ + & \text{Subsequent Return for June 2008-June 2009} & \\ = & \text{28-Month Return on Bond B} & \end{array}$$

More formally, with yields expressed in terms of annual returns, this is expressed as:

$$(1.06)^{t_{2009}} = (1.05)^{t_{2008}} \times (1 + \gamma) \quad (2)$$

where  $\gamma$  (“gamma”) represents the annual return for June 30, 2008 to June 30, 2009, and  $t_{2008}$  and  $t_{2009}$  represent the time in years to June 30, 2008 and June 30, 2009, respectively.

In this example, the analysis reveals that gamma, the annual return for the period July 1, 2008 to June 30, 2009, is 7.35 percent. In other words, an average annual yield of 6 percent for the 28-month period from March 1, 2007 to June 30, 2009 is comprised of an annual return of 5 percent for the period March 1, 2007 to June 30, 2008 followed by a return of 7.35 percent for the period July 1, 2008 to July 30, 2009.<sup>6</sup>

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<sup>6</sup> In the example, bond A matures in 16 months, or 1.33 years, thus the return for the first period to June 30, 2008 is given by  $1.05^{1.33} = 1.067$ . If this amount then earns 7.35 percent in the year from July 1, 2008 to June 30, 2009, the total return for the 28-month period will be 14.56 percent, which is the same return achieved by compounding 6 percent for 28 months.

## Results

The discount factor for each year from mid-2008 to mid-2036 that results from the analysis of the yields on traded zero-coupon securities is presented in Table 2.

**TABLE 2**

Year	Factor to Present Value to June 30, 2008
2008	1.0000
2009	0.9547
2010	0.9167
2011	0.8785
2012	0.8450
2013	0.8015
2014	0.7629
2015	0.7264
2016	0.6896
2017	0.6562
2018	0.6226
2019	0.5892
2020	0.5571
2021	0.5280
2022	0.5022
2023	0.4780
2024	0.4538
2025	0.4320
2026	0.4122
2027	0.3930
2028	0.3763
2029	0.3596
2030	0.3450
2031	0.3338
2032	0.3208
2033	0.3075
2034	0.2957
2035	0.2813
2036	0.2643

See Appendix B, Table B-4.

1 For years after 2036, the yield for 2036, 4.86 percent is used. Note that because yields are  
 2 generally declining as the time to maturity increases from 20 to 30 years, this is a reasonable  
 3 figure, and perhaps slightly conservative.<sup>7</sup> The results are presented in Table 3.

TABLE 3

Year	Factor to Present Value to June 30, 2008	Year	Factor to Present Value to June 30, 2008	Year	Factor to Present Value to June 30, 2008
2037	0.2520	2061	0.0806	2085	0.0258
2038	0.2404	2062	0.0768	2086	0.0246
2039	0.2292	2063	0.0733	2087	0.0234
2040	0.2186	2064	0.0699	2088	0.0223
2041	0.2084	2065	0.0666	2089	0.0213
2042	0.1987	2066	0.0635	2090	0.0203
2043	0.1895	2067	0.0606	2091	0.0194
2044	0.1807	2068	0.0578	2092	0.0185
2045	0.1723	2069	0.0551	2093	0.0176
2046	0.1643	2070	0.0525	2094	0.0168
2047	0.1567	2071	0.0501	2095	0.0160
2048	0.1494	2072	0.0478	2096	0.0153
2049	0.1425	2073	0.0456	2097	0.0146
2050	0.1359	2074	0.0434	2098	0.0139
2051	0.1296	2075	0.0414	2099	0.0132
2052	0.1236	2076	0.0395	2100	0.0126
2053	0.1178	2077	0.0377	2101	0.0120
2054	0.1124	2078	0.0359	2102	0.0115
2055	0.1072	2079	0.0343	2103	0.0109
2056	0.1022	2080	0.0327	2104	0.0104
2057	0.0974	2081	0.0311	2105	0.0100
2058	0.0929	2082	0.0297	2106	0.0095
2059	0.0886	2083	0.0283	2107	0.0091
2060	0.0845	2084	0.0270	2108	0.0086

See Appendix B, Table B-4.

<sup>7</sup> Recall that higher yields will result in a lower present value. Therefore in the context of a bankruptcy, a yield that is high will be conservative in the sense that it will produce a present value of future liabilities that is low relative to the present value that would result from use of a lower yield.



APPENDIX A

**M. ALEXIS MANIATIS****Principal**

M. Alexis Maniatis is President and CEO of *The Brattle Group*. He previously directed the firm's Washington and London offices and led the firm's litigation practice. Mr. Maniatis has more than fifteen years of experience as a consultant providing advice and expert testimony on the application of economics, accounting, and corporate finance in estimating commercial damages, project valuation, and regulation.

Mr. Maniatis's practice focuses on commercial damages and finance. He has provided testimony and consulting on cases involving antitrust, breach of contract, corporate acquisitions, intellectual property, and product liability. Mr. Maniatis also has provided consulting and testimony in cases involving profitability measurement, asset and business valuation, cost of capital estimation, taxation, the estimation of country risks, and reasonable royalties. These engagements often involve the use of sophisticated modeling and the ability to develop credible evidence to supplement information developed in the discovery process. His experience includes:

- ▶ **Payment networks:** In a series of cases over fifteen years, Mr. Maniatis has analyzed the economics of card payment networks on behalf of VISA USA and VISA International. He has assessed the level, structure, and economic basis for charges to member banks and the relationship between those charges and prices faced by consumers for related services.
- ▶ **Credit card issuing:** Mr. Maniatis has participated in studies that evaluated the profitability of credit card issuing and provided consulting services in litigation involving the value of credit card portfolios.
- ▶ **International Asset Valuation:** Mr. Maniatis has provided consulting and testimony on the value of overseas assets and business on behalf of numerous parties involved in international arbitrations among shareholders and between investors and states. These disputes concerned investments in banking, energy, mining, petroleum, and agribusiness.
- ▶ **Commercial Damages:** Mr. Maniatis has estimated damages in dozens of cases for a wide variety of industries, including financial services, transportation, telecommunications, metals, electricity, software, consumer products, media, medical devices, security equipment, natural gas, and petroleum.
- ▶ **Regulation:** evaluation of risk and capital recovery for regulated assets and acquisitions. Regulatory design and pricing for insurance services, evaluation of competition in the satellite market, and analysis of access to regulated facilities resulting from telecommunications deregulation.
- ▶ **Environmental Litigation:** consulting and testimony on non-compliance penalties, Superfund allocation, cost recovery, NCP consistency, and ability-to-pay.

Mr. Maniatis received a B.A. in economics from Wesleyan University and an M.B.A. from Yale University where he served as a teaching assistant in Accounting and earned letters of distinction in Corporate Finance and International Finance.

**M. Alexis Maniatis**  
**Principal**

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## TESTIMONY

Expert report on damages submitted in *Dereje Mekonen v. Mohammed Al-Amoudi and Marec Corp., Inc. v. Dereje Mekonen*, Civil Action No. 1:06cv613, before the United States District Court for the Eastern District of Virginia.

Expert report and testimony on damages submitted in *Archer Daniels Midland Company and Tate & Lyle Ingredients Americas, Inc. v. The United Mexican States*, Case No. ARB(AF)/02/01 before the International Centre for Settlement of Investment Disputes.

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**M. Alexis Maniatis**  
**Principal****3**

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**M. Alexis Maniatis**  
**Principal****4**

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**APPENDIX B**

**Table B-1**  
**Bloomberg U.S. Treasury STRIPS**

8-Character CUSIP	STRIP Coupon or Principal	Issue Date	Maturity	Term	Ask Annual Yield
[1]	[2]	[3]	[4]	[5]	[6]
9128336G	Coupon	6/30/2006	6/30/2008	2.0	4.684%
912820NF	Principal	6/30/2006	6/30/2008	2.0	4.776%
912833C6	Coupon	1/15/2004	7/15/2008	4.5	4.581%
9128336P	Coupon	7/31/2006	7/31/2008	2.0	4.668%
912820NJ	Principal	7/31/2006	7/31/2008	2.0	4.771%
912833CU	Coupon	2/15/1985	8/15/2008	23.5	4.735%
912820JD	Principal	8/15/2003	8/15/2008	5.0	4.863%
9128335D	Coupon	2/28/2006	8/31/2008	2.5	4.632%
912820NN	Principal	8/31/2006	8/31/2008	2.0	4.694%
912833ZY	Coupon	9/15/2003	9/15/2008	5.0	4.796%
912820JG	Principal	9/15/2003	9/15/2008	5.0	4.433%
912820NQ	Principal	10/2/2006	9/30/2008	2.0	4.684%
9128335L	Coupon	3/31/2006	9/30/2008	2.5	4.643%
912833A5	Coupon	10/15/2003	10/15/2008	5.0	4.658%
912820JJ	Principal	10/15/2003	10/15/2008	5.0	4.842%
9128335T	Coupon	5/1/2006	10/31/2008	2.5	4.632%
912833GD	Coupon	11/15/1984	11/15/2008	24.0	4.745%
912820DK	Principal	11/16/1998	11/15/2008	10.0	4.776%
912820NW	Principal	11/30/2006	11/30/2008	2.0	4.745%
9128336A	Coupon	5/31/2006	11/30/2008	2.5	4.673%
912833B9	Coupon	12/15/2003	12/15/2008	5.0	4.515%
912820JQ	Principal	12/15/2003	12/15/2008	5.0	4.500%
9128336H	Coupon	6/30/2006	12/31/2008	2.5	4.602%
912833C7	Coupon	1/15/2004	1/15/2009	5.0	4.586%
912820JS	Principal	1/15/2004	1/15/2009	5.0	4.377%
9128336Q	Coupon	7/31/2006	1/31/2009	2.5	4.725%
912833CV	Coupon	2/15/1985	2/15/2009	24.0	4.689%
912820JW	Principal	2/17/2004	2/15/2009	5.0	4.694%
9128335E	Coupon	2/28/2006	2/28/2009	3.0	4.622%
9128332B	Coupon	3/15/2004	3/15/2009	5.0	4.709%
912820JZ	Principal	3/15/2004	3/15/2009	5.0	4.684%
9128335M	Coupon	3/31/2006	3/31/2009	3.0	4.673%
912820PH	Principal	4/2/2007	3/31/2009	2.0	4.469%
9128332D	Coupon	4/15/2004	4/15/2009	5.0	4.663%
912820KB	Principal	4/15/2004	4/15/2009	5.0	4.561%
912820PL	Principal	4/30/2007	4/30/2009	2.0	4.781%
9128335U	Coupon	5/1/2006	4/30/2009	3.0	4.725%
912833GE	Coupon	11/15/1984	5/15/2009	24.5	4.632%
912820DV	Principal	5/17/1999	5/15/2009	10.0	4.760%
9128336B	Coupon	5/31/2006	5/31/2009	3.0	4.760%
9128332G	Coupon	6/15/2004	6/15/2009	5.0	4.735%
912820KH	Principal	6/15/2004	6/15/2009	5.0	4.540%
9128336J	Coupon	6/30/2006	6/30/2009	3.0	4.735%

**Table B-1**  
**Bloomberg U.S. Treasury STRIPS**

8-Character CUSIP	STRIP Coupon or Principal	Issue Date	Maturity	Term	Ask Annual Yield
[1]	[2]	[3]	[4]	[5]	[6]
9128332J	Coupon	7/15/2004	7/15/2009	5.0	4.735%
912820KK	Principal	7/15/2004	7/15/2009	5.0	4.627%
9128336R	Coupon	7/31/2006	7/31/2009	3.0	4.735%
912833CW	Coupon	2/15/1985	8/15/2009	24.5	4.592%
912820EA	Principal	8/16/1999	8/15/2009	10.0	4.694%
9128335F	Coupon	2/28/2006	8/31/2009	3.5	4.622%
9128333K	Coupon	9/15/2004	9/15/2009	5.0	4.653%
912820KS	Principal	9/15/2004	9/15/2009	5.0	4.760%
9128335N	Coupon	3/31/2006	9/30/2009	3.5	4.638%
9128333M	Coupon	10/15/2004	10/15/2009	5.0	4.592%
912820KU	Principal	10/15/2004	10/15/2009	5.0	4.571%
9128335V	Coupon	5/1/2006	10/31/2009	3.5	4.602%
912833GF	Coupon	11/15/1984	11/15/2009	25.0	4.612%
912800AA	Principal	11/15/1984	11/15/2009	25.0	4.586%
9128336C	Coupon	5/31/2006	11/30/2009	3.5	4.592%
9128333Q	Coupon	12/15/2004	12/15/2009	5.0	4.617%
912820LB	Principal	12/15/2004	12/15/2009	5.0	4.781%
9128336K	Coupon	6/30/2006	12/31/2009	3.5	4.632%
9128333S	Coupon	1/18/2005	1/15/2010	5.0	4.607%
912820LD	Principal	1/18/2005	1/15/2010	5.0	4.781%
9128336S	Coupon	7/31/2006	1/31/2010	3.5	4.617%
912833CX	Coupon	2/15/1985	2/15/2010	25.0	4.515%
912820EM	Principal	2/15/2000	2/15/2010	10.0	4.576%
9128335G	Coupon	2/28/2006	2/28/2010	4.0	4.561%
9128333V	Coupon	3/15/2005	3/15/2010	5.0	4.561%
912820LL	Principal	3/15/2005	3/15/2010	5.0	4.704%
9128335P	Coupon	3/31/2006	3/31/2010	4.0	4.535%
9128333X	Coupon	4/15/2005	4/15/2010	5.0	4.561%
912820LN	Principal	4/15/2005	4/15/2010	5.0	4.586%
9128335W	Coupon	5/1/2006	4/30/2010	4.0	4.556%
912833JU	Coupon	11/15/1985	5/15/2010	24.5	4.546%
912820LR	Principal	5/16/2005	5/15/2010	5.0	4.546%
9128336D	Coupon	5/31/2006	5/31/2010	4.0	4.551%
9128334A	Coupon	6/15/2005	6/15/2010	5.0	4.556%
912820LU	Principal	6/15/2005	6/15/2010	5.0	4.540%
9128336L	Coupon	6/30/2006	6/30/2010	4.0	4.551%
9128334C	Coupon	7/15/2005	7/15/2010	5.0	4.540%
912820LW	Principal	7/15/2005	7/15/2010	5.0	4.551%
9128336T	Coupon	7/31/2006	7/31/2010	4.0	4.535%
912833CY	Coupon	2/15/1985	8/15/2010	25.5	4.530%
912820FT	Principal	8/15/2000	8/15/2010	10.0	4.520%
9128335H	Coupon	2/28/2006	8/31/2010	4.5	4.469%
9128334F	Coupon	9/15/2005	9/15/2010	5.0	4.484%



**Table B-1**  
**Bloomberg U.S. Treasury STRIPS**

8-Character CUSIP	STRIP Coupon or Principal	Issue Date	Maturity	Term	Ask Annual Yield
[1]	[2]	[3]	[4]	[5]	[6]
912820MD	Principal	9/15/2005	9/15/2010	5.0	4.556%
9128335Q	Coupon	3/31/2006	9/30/2010	4.5	4.474%
9128334H	Coupon	10/17/2005	10/15/2010	5.0	4.479%
912820MF	Principal	10/17/2005	10/15/2010	5.0	4.561%
9128335X	Coupon	5/1/2006	10/31/2010	4.5	4.484%
912833JV	Coupon	11/15/1985	11/15/2010	25.0	4.464%
912820MJ	Principal	11/15/2005	11/15/2010	5.0	4.520%
9128336E	Coupon	5/31/2006	11/30/2010	4.5	4.454%
9128334L	Coupon	12/15/2005	12/15/2010	5.0	4.540%
912820MM	Principal	12/15/2005	12/15/2010	5.0	4.505%
9128336M	Coupon	6/30/2006	12/31/2010	4.5	4.515%
9128334N	Coupon	1/17/2006	1/15/2011	5.0	4.479%
912820MP	Principal	1/17/2006	1/15/2011	5.0	4.520%
9128336U	Coupon	7/31/2006	1/31/2011	4.5	4.479%
912833CZ	Coupon	2/15/1985	2/15/2011	26.0	4.464%
912820GC	Principal	2/15/2001	2/15/2011	10.0	4.505%
9128335J	Coupon	2/28/2006	2/28/2011	5.0	4.418%
912820MU	Principal	2/28/2006	2/28/2011	5.0	4.520%
9128335R	Coupon	3/31/2006	3/31/2011	5.0	4.423%
912820MX	Principal	3/31/2006	3/31/2011	5.0	4.571%
9128335Y	Coupon	5/1/2006	4/30/2011	5.0	4.413%
912820NA	Principal	5/1/2006	4/30/2011	5.0	4.520%
912833JW	Coupon	11/15/1985	5/15/2011	25.5	4.265%
9128336F	Coupon	5/31/2006	5/31/2011	5.0	4.300%
912820NE	Principal	5/31/2006	5/31/2011	5.0	4.525%
9128336N	Coupon	6/30/2006	6/30/2011	5.0	4.469%
912820NG	Principal	6/30/2006	6/30/2011	5.0	4.535%
9128336V	Coupon	7/31/2006	7/31/2011	5.0	4.459%
912820NK	Principal	7/31/2006	7/31/2011	5.0	4.535%
912833DA	Coupon	2/15/1985	8/15/2011	26.5	4.438%
912820GL	Principal	8/15/2001	8/15/2011	10.0	4.520%
9128336W	Coupon	8/31/2006	8/31/2011	5.0	4.397%
912820NP	Principal	8/31/2006	8/31/2011	5.0	4.546%
912833JX	Coupon	11/15/1985	11/15/2011	26.0	4.025%
9128336Z	Coupon	11/30/2006	11/30/2011	5.0	3.974%
912833DB	Coupon	2/15/1985	2/15/2012	27.0	4.489%
912820GV	Principal	2/15/2002	2/15/2012	10.0	4.530%
9128337H	Coupon	4/2/2007	3/31/2012	5.0	4.540%
912820PJ	Principal	4/2/2007	3/31/2012	5.0	4.540%
9128337J	Coupon	4/30/2007	4/30/2012	5.0	4.464%
912820PM	Principal	4/30/2007	4/30/2012	5.0	4.459%
912833JY	Coupon	11/15/1985	5/15/2012	26.5	4.285%
912833DC	Coupon	2/15/1985	8/15/2012	27.5	4.494%

**Table B-1**  
**Bloomberg U.S. Treasury STRIPS**

8-Character CUSIP	STRIP Coupon or Principal	Issue Date	Maturity	Term	Ask Annual Yield
[1]	[2]	[3]	[4]	[5]	[6]
912820HF	Principal	8/15/2002	8/15/2012	10.0	4.520%
912833JZ	Coupon	11/15/1985	11/15/2012	27.0	4.535%
912820HL	Principal	11/15/2002	11/15/2012	10.0	4.551%
912833DD	Coupon	2/15/1985	2/15/2013	28.0	4.535%
912820HR	Principal	2/18/2003	2/15/2013	10.0	4.551%
912833KA	Coupon	11/15/1985	5/15/2013	27.5	4.571%
912820HX	Principal	5/15/2003	5/15/2013	10.0	4.566%
912833DE	Coupon	2/15/1985	8/15/2013	28.5	4.556%
912820JE	Principal	8/15/2003	8/15/2013	10.0	4.561%
912833KB	Coupon	11/15/1985	11/15/2013	28.0	4.602%
912820JN	Principal	11/17/2003	11/15/2013	10.0	4.602%
912833DF	Coupon	2/15/1985	2/15/2014	29.0	4.617%
912820JX	Principal	2/17/2004	2/15/2014	10.0	4.612%
912833KC	Coupon	11/15/1985	5/15/2014	28.5	4.638%
912820KF	Principal	5/17/2004	5/15/2014	10.0	4.632%
912833DG	Coupon	2/15/1985	8/15/2014	29.5	4.632%
912820KQ	Principal	8/16/2004	8/15/2014	10.0	4.632%
912833KD	Coupon	11/15/1985	11/15/2014	29.0	4.643%
912820KZ	Principal	11/15/2004	11/15/2014	10.0	4.648%
912833DH	Coupon	2/15/1985	2/15/2015	30.0	4.658%
912803AA	Principal	2/15/1985	2/15/2015	30.0	4.694%
912833KE	Coupon	11/15/1985	5/15/2015	29.5	4.668%
912820LS	Principal	5/16/2005	5/15/2015	10.0	4.668%
912833JT	Coupon	8/15/1985	8/15/2015	30.0	4.694%
912803AC	Principal	8/15/1985	8/15/2015	30.0	4.689%
912833KF	Coupon	11/15/1985	11/15/2015	30.0	4.709%
912803AE	Principal	11/15/1985	11/15/2015	30.0	4.699%
912833KG	Coupon	2/15/1986	2/15/2016	30.0	4.719%
912803AF	Principal	2/15/1986	2/15/2016	30.0	4.694%
912833KH	Coupon	5/15/1986	5/15/2016	30.0	4.725%
912803AH	Principal	5/15/1986	5/15/2016	30.0	4.719%
912833KJ	Coupon	8/15/1987	8/15/2016	29.0	4.745%
912820NM	Principal	8/15/2006	8/15/2016	10.0	4.817%
912833KK	Coupon	11/15/1986	11/15/2016	30.0	4.755%
912803AK	Principal	11/15/1986	11/15/2016	30.0	4.745%
912833KL	Coupon	8/15/1987	2/15/2017	29.5	4.750%
912833KM	Coupon	5/15/1987	5/15/2017	30.0	4.791%
912803AL	Principal	5/15/1987	5/15/2017	30.0	4.776%
912833KN	Coupon	8/15/1987	8/15/2017	30.0	4.796%
912803AM	Principal	8/15/1987	8/15/2017	30.0	4.776%
912833KP	Coupon	5/16/1988	11/15/2017	29.5	4.827%
912833KQ	Coupon	5/16/1988	2/15/2018	29.8	4.832%
912833KR	Coupon	5/15/1988	5/15/2018	30.0	4.832%

**Table B-1**  
**Bloomberg U.S. Treasury STRIPS**

8-Character CUSIP	STRIP Coupon or Principal	Issue Date	Maturity	Term	Ask Annual Yield
[1]	[2]	[3]	[4]	[5]	[6]
912803AN	Principal	5/15/1988	5/15/2018	30.0	4.822%
912833KS	Coupon	11/22/1988	8/15/2018	29.7	4.852%
912833KT	Coupon	11/15/1988	11/15/2018	30.0	4.858%
912803AP	Principal	11/15/1988	11/15/2018	30.0	4.852%
912833KU	Coupon	2/15/1989	2/15/2019	30.0	4.883%
912803AQ	Principal	2/15/1989	2/15/2019	30.0	4.868%
912833KV	Coupon	5/15/1990	5/15/2019	29.0	4.914%
912833KW	Coupon	8/15/1989	8/15/2019	30.0	4.914%
912803AR	Principal	8/15/1989	8/15/2019	30.0	4.888%
912833KX	Coupon	5/15/1990	11/15/2019	29.5	4.945%
912833KY	Coupon	2/15/1990	2/15/2020	30.0	4.924%
912803AS	Principal	2/15/1990	2/15/2020	30.0	4.919%
912833KZ	Coupon	5/15/1990	5/15/2020	30.0	4.981%
912803AT	Principal	5/15/1990	5/15/2020	30.0	4.950%
912833LA	Coupon	8/15/1990	8/15/2020	30.0	5.001%
912803AU	Principal	8/15/1990	8/15/2020	30.0	4.960%
912833LB	Coupon	11/15/1990	11/15/2020	30.0	5.006%
912833LC	Coupon	2/15/1991	2/15/2021	30.0	5.011%
912803AV	Principal	2/15/1991	2/15/2021	30.0	5.001%
912833LD	Coupon	5/15/1991	5/15/2021	30.0	5.027%
912803AW	Principal	5/15/1991	5/15/2021	30.0	4.991%
912833LE	Coupon	8/15/1991	8/15/2021	30.0	5.032%
912803AX	Principal	8/15/1991	8/15/2021	30.0	4.991%
912833LF	Coupon	11/15/1991	11/15/2021	30.0	5.027%
912803AY	Principal	11/15/1991	11/15/2021	30.0	5.001%
912833LG	Coupon	8/17/1992	2/15/2022	29.5	5.037%
912833LH	Coupon	11/16/1992	5/15/2022	29.5	5.022%
912833LJ	Coupon	8/17/1992	8/15/2022	30.0	5.027%
912803AZ	Principal	8/17/1992	8/15/2022	30.0	5.001%
912833LK	Coupon	11/16/1992	11/15/2022	30.0	5.037%
912803BA	Principal	11/16/1992	11/15/2022	30.0	5.001%
912833LL	Coupon	2/15/1993	2/15/2023	30.0	5.032%
912803BB	Principal	2/15/1993	2/15/2023	30.0	5.011%
912833LN	Coupon	8/15/1994	5/15/2023	28.7	5.027%
912833LM	Coupon	8/15/1993	8/15/2023	30.0	5.027%
912803BC	Principal	8/15/1993	8/15/2023	30.0	5.006%
912833LP	Coupon	8/15/1994	11/15/2023	29.3	5.027%
912833LQ	Coupon	2/15/1995	2/15/2024	29.0	5.037%
912833LR	Coupon	8/15/1994	5/15/2024	29.7	5.042%
912833LS	Coupon	2/15/1995	8/15/2024	29.5	5.037%
912833LT	Coupon	8/15/1994	11/15/2024	30.3	5.042%
912803BD	Principal	8/15/1994	11/15/2024	30.3	5.022%
912833LU	Coupon	2/15/1995	2/15/2025	30.0	5.037%

**Table B-1**  
**Bloomberg U.S. Treasury STRIPS**

8-Character CUSIP	STRIP Coupon or Principal	Issue Date	Maturity	Term	Ask Annual Yield
[1]	[2]	[3]	[4]	[5]	[6]
912803BE	Principal	2/15/1995	2/15/2025	30.0	5.027%
912833LV	Coupon	11/15/1996	5/15/2025	28.5	5.047%
912833LW	Coupon	8/15/1995	8/15/2025	30.0	5.047%
912803BF	Principal	8/15/1995	8/15/2025	30.0	5.016%
912833LX	Coupon	11/15/1996	11/15/2025	29.0	5.042%
912833LY	Coupon	2/15/1996	2/15/2026	30.0	5.032%
912803BG	Principal	2/15/1996	2/15/2026	30.0	5.006%
912833LZ	Coupon	11/15/1996	5/15/2026	29.5	5.032%
912833PA	Coupon	8/15/1996	8/15/2026	30.0	5.032%
912803BH	Principal	8/15/1996	8/15/2026	30.0	5.016%
912833PB	Coupon	11/15/1996	11/15/2026	30.0	5.037%
912803BJ	Principal	11/15/1996	11/15/2026	30.0	5.011%
912833PC	Coupon	2/15/1997	2/15/2027	30.0	5.032%
912803BK	Principal	2/18/1997	2/15/2027	30.0	5.011%
912833PD	Coupon	11/15/1997	5/15/2027	29.5	5.032%
912833PE	Coupon	8/15/1997	8/15/2027	30.0	5.016%
912803BL	Principal	8/15/1997	8/15/2027	30.0	5.001%
912803BM	Principal	11/15/1997	11/15/2027	30.0	4.996%
912833QB	Coupon	11/17/1997	11/15/2027	30.0	5.022%
912833RY	Coupon	8/17/1998	2/15/2028	29.5	4.996%
912833WQ	Coupon	11/16/1998	5/15/2028	29.5	4.996%
912833RZ	Coupon	8/17/1998	8/15/2028	30.0	5.001%
912803BP	Principal	8/17/1998	8/15/2028	30.0	4.981%
912833WR	Coupon	11/16/1998	11/15/2028	30.0	5.001%
912803BV	Principal	11/16/1998	11/15/2028	30.0	4.975%
912833XN	Coupon	2/16/1999	2/15/2029	30.0	4.986%
912803BW	Principal	2/16/1999	2/15/2029	30.0	4.970%
912833XS	Coupon	2/15/2000	5/15/2029	29.2	4.975%
912833XP	Coupon	8/16/1999	8/15/2029	30.0	4.986%
912803CG	Principal	8/16/1999	8/15/2029	30.0	4.970%
912833XT	Coupon	2/15/2000	11/15/2029	29.7	4.986%
912833XX	Coupon	2/15/2001	2/15/2030	29.0	4.965%
912833XU	Coupon	2/15/2000	5/15/2030	30.2	4.950%
912803CH	Principal	2/15/2000	5/15/2030	30.2	4.950%
912833XY	Coupon	2/15/2001	8/15/2030	29.5	4.940%
912833XZ	Coupon	2/15/2001	2/15/2031	30.0	4.914%
912803CK	Principal	2/15/2001	2/15/2031	30.0	4.934%
9128334S	Coupon	2/15/2006	8/15/2031	25.5	4.863%
9128334T	Coupon	2/15/2006	2/15/2032	26.0	4.858%
9128334U	Coupon	2/15/2006	8/15/2032	26.5	4.842%
9128334V	Coupon	2/15/2006	2/15/2033	27.0	4.822%
9128334W	Coupon	2/15/2006	8/15/2033	27.5	4.827%
9128334X	Coupon	2/15/2006	2/15/2034	28.0	4.806%

**Table B-1**  
**Bloomberg U.S. Treasury STRIPS**

8-Character CUSIP	STRIP Coupon or Principal	Issue Date	Maturity	Term	Ask Annual Yield
[1]	[2]	[3]	[4]	[5]	[6]
9128334Y	Coupon	2/15/2006	8/15/2034	28.5	4.791%
9128334Z	Coupon	2/15/2006	2/15/2035	29.0	4.806%
9128335A	Coupon	2/15/2006	8/15/2035	29.5	4.806%
9128335B	Coupon	2/15/2006	2/15/2036	30.0	4.806%
912803CX	Principal	2/15/2006	2/15/2036	30.0	4.878%
9128337E	Coupon	2/15/2007	8/15/2036	29.5	4.868%
9128337F	Coupon	2/15/2007	2/15/2037	30.0	4.837%
912803CZ	Principal	2/15/2007	2/15/2037	30.0	4.842%
Number of Securities:		266			

Source:

Bloomberg L.P. as of: April 30, 2007

Notes:

[1]: Eight-character CUSIPs for non-callable non-inflation indexed U.S. Government STRIPS maturing on or after June 30, 2008 with Composite Bloomberg Bond Trader (i.e. executable) pricing data.

[2]: Indicates whether STRIP is coupon or principal STRIP.

[3]: Date security was issued.

[4]: Date security matures.

[5]: Calculated as years between [3] and [4].

[6]: Based on the ask price, the yield expressed as an annualized percent.

**Table B-2**  
**Average Annual Ask Yields by Maturity**

Maturity	Number of Securities with Maturity	Average of Ask Annual Yields
[1]	[2]	[3]
6/30/2008	2	4.73%
7/15/2008	1	4.58%
7/31/2008	2	4.72%
8/15/2008	2	4.80%
8/31/2008	2	4.66%
9/15/2008	2	4.61%
9/30/2008	2	4.66%
10/15/2008	2	4.75%
10/31/2008	1	4.63%
11/15/2008	2	4.76%
11/30/2008	2	4.71%
12/15/2008	2	4.51%
12/31/2008	1	4.60%
1/15/2009	2	4.48%
1/31/2009	1	4.73%
2/15/2009	2	4.69%
2/28/2009	1	4.62%
3/15/2009	2	4.70%
3/31/2009	2	4.57%
4/15/2009	2	4.61%
4/30/2009	2	4.75%
5/15/2009	2	4.70%
5/31/2009	1	4.76%
6/15/2009	2	4.64%
6/30/2009	1	4.74%
7/15/2009	2	4.68%
7/31/2009	1	4.74%
8/15/2009	2	4.64%
8/31/2009	1	4.62%
9/15/2009	2	4.71%
9/30/2009	1	4.64%
10/15/2009	2	4.58%
10/31/2009	1	4.60%
11/15/2009	2	4.60%
11/30/2009	1	4.59%
12/15/2009	2	4.70%
12/31/2009	1	4.63%
1/15/2010	2	4.69%
1/31/2010	1	4.62%
2/15/2010	2	4.55%
2/28/2010	1	4.56%
3/15/2010	2	4.63%
3/31/2010	1	4.54%
4/15/2010	2	4.57%
4/30/2010	1	4.56%
5/15/2010	2	4.55%

**Table B-2**  
**Average Annual Ask Yields by Maturity**

Maturity	Number of Securities with Maturity	Average of Ask Annual Yields
[1]	[2]	[3]
5/31/2010	1	4.55%
6/15/2010	2	4.55%
6/30/2010	1	4.55%
7/15/2010	2	4.55%
7/31/2010	1	4.54%
8/15/2010	2	4.53%
8/31/2010	1	4.47%
9/15/2010	2	4.52%
9/30/2010	1	4.47%
10/15/2010	2	4.52%
10/31/2010	1	4.48%
11/15/2010	2	4.49%
11/30/2010	1	4.45%
12/15/2010	2	4.52%
12/31/2010	1	4.52%
1/15/2011	2	4.50%
1/31/2011	1	4.48%
2/15/2011	2	4.48%
2/28/2011	2	4.47%
3/31/2011	2	4.50%
4/30/2011	2	4.47%
5/15/2011	1	4.27%
5/31/2011	2	4.41%
6/30/2011	2	4.50%
7/31/2011	2	4.50%
8/15/2011	2	4.48%
8/31/2011	2	4.47%
11/15/2011	1	4.03%
11/30/2011	1	3.97%
2/15/2012	2	4.51%
3/31/2012	2	4.54%
4/30/2012	2	4.46%
5/15/2012	1	4.29%
8/15/2012	2	4.51%
11/15/2012	2	4.54%
2/15/2013	2	4.54%
5/15/2013	2	4.57%
8/15/2013	2	4.56%
11/15/2013	2	4.60%
2/15/2014	2	4.61%
5/15/2014	2	4.64%
8/15/2014	2	4.63%
11/15/2014	2	4.65%
2/15/2015	2	4.68%
5/15/2015	2	4.67%
8/15/2015	2	4.69%

**Table B-2**  
**Average Annual Ask Yields by Maturity**

Maturity	Number of Securities with Maturity	Average of Ask Annual Yields
[1]	[2]	[3]
11/15/2015	2	4.70%
2/15/2016	2	4.71%
5/15/2016	2	4.72%
8/15/2016	2	4.78%
11/15/2016	2	4.75%
2/15/2017	1	4.75%
5/15/2017	2	4.78%
8/15/2017	2	4.79%
11/15/2017	1	4.83%
2/15/2018	1	4.83%
5/15/2018	2	4.83%
8/15/2018	1	4.85%
11/15/2018	2	4.86%
2/15/2019	2	4.88%
5/15/2019	1	4.91%
8/15/2019	2	4.90%
11/15/2019	1	4.95%
2/15/2020	2	4.92%
5/15/2020	2	4.97%
8/15/2020	2	4.98%
11/15/2020	1	5.01%
2/15/2021	2	5.01%
5/15/2021	2	5.01%
8/15/2021	2	5.01%
11/15/2021	2	5.01%
2/15/2022	1	5.04%
5/15/2022	1	5.02%
8/15/2022	2	5.01%
11/15/2022	2	5.02%
2/15/2023	2	5.02%
5/15/2023	1	5.03%
8/15/2023	2	5.02%
11/15/2023	1	5.03%
2/15/2024	1	5.04%
5/15/2024	1	5.04%
8/15/2024	1	5.04%
11/15/2024	2	5.03%
2/15/2025	2	5.03%
5/15/2025	1	5.05%
8/15/2025	2	5.03%
11/15/2025	1	5.04%
2/15/2026	2	5.02%
5/15/2026	1	5.03%
8/15/2026	2	5.02%
11/15/2026	2	5.02%
2/15/2027	2	5.02%



**Table B-2**  
**Average Annual Ask Yields by Maturity**

Maturity	Number of Securities with Maturity	Average of Ask Annual Yields
[1]	[2]	[3]
5/15/2027	1	5.03%
8/15/2027	2	5.01%
11/15/2027	2	5.01%
2/15/2028	1	5.00%
5/15/2028	1	5.00%
8/15/2028	2	4.99%
11/15/2028	2	4.99%
2/15/2029	2	4.98%
5/15/2029	1	4.98%
8/15/2029	2	4.98%
11/15/2029	1	4.99%
2/15/2030	1	4.97%
5/15/2030	2	4.95%
8/15/2030	1	4.94%
2/15/2031	2	4.92%
8/15/2031	1	4.86%
2/15/2032	1	4.86%
8/15/2032	1	4.84%
2/15/2033	1	4.82%
8/15/2033	1	4.83%
2/15/2034	1	4.81%
8/15/2034	1	4.79%
2/15/2035	1	4.81%
8/15/2035	1	4.81%
2/15/2036	2	4.84%
8/15/2036	1	4.87%
2/15/2037	2	4.84%
Total Securities:	266	

Sources and Notes:

[1]: Unique maturity dates from Table B-1.

[2]: Number of securities with maturity of [1].

[3]: Average of ask annual yields from Table B-1 for securities with maturity of [1].

**Table B-3**  
**Interpolated Annualized Yields to Maturity**

Date	Yield for Exact Maturity Matches	Interpolation Points						Annualized
		Left Point			Right Point			Yield to Maturity
		Maturity	Yield	Weight	Maturity	Yield	Weight	
[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]
6/30/2008	4.73%							4.73%
6/30/2009	4.74%							4.74%
6/30/2010	4.55%							4.55%
6/30/2011	4.50%							4.50%
6/30/2012		5/15/2012	4.29%	0.50	8/15/2012	4.51%	0.50	4.40%
6/30/2013		5/15/2013	4.57%	0.50	8/15/2013	4.56%	0.50	4.56%
6/30/2014		5/15/2014	4.64%	0.50	8/15/2014	4.63%	0.50	4.63%
6/30/2015		5/15/2015	4.67%	0.50	8/15/2015	4.69%	0.50	4.68%
6/30/2016		5/15/2016	4.72%	0.50	8/15/2016	4.78%	0.50	4.75%
6/30/2017		5/15/2017	4.78%	0.50	8/15/2017	4.79%	0.50	4.78%
6/30/2018		5/15/2018	4.83%	0.50	8/15/2018	4.85%	0.50	4.84%
6/30/2019		5/15/2019	4.91%	0.50	8/15/2019	4.90%	0.50	4.91%
6/30/2020		5/15/2020	4.97%	0.50	8/15/2020	4.98%	0.50	4.97%
6/30/2021		5/15/2021	5.01%	0.50	8/15/2021	5.01%	0.50	5.01%
6/30/2022		5/15/2022	5.02%	0.50	8/15/2022	5.01%	0.50	5.02%
6/30/2023		5/15/2023	5.03%	0.50	8/15/2023	5.02%	0.50	5.02%
6/30/2024		5/15/2024	5.04%	0.50	8/15/2024	5.04%	0.50	5.04%
6/30/2025		5/15/2025	5.05%	0.50	8/15/2025	5.03%	0.50	5.04%
6/30/2026		5/15/2026	5.03%	0.50	8/15/2026	5.02%	0.50	5.03%
6/30/2027		5/15/2027	5.03%	0.50	8/15/2027	5.01%	0.50	5.02%
6/30/2028		5/15/2028	5.00%	0.50	8/15/2028	4.99%	0.50	4.99%
6/30/2029		5/15/2029	4.98%	0.50	8/15/2029	4.98%	0.50	4.98%
6/30/2030		5/15/2030	4.95%	0.50	8/15/2030	4.94%	0.50	4.95%
6/30/2031		2/15/2031	4.92%	0.25	8/15/2031	4.86%	0.75	4.88%
6/30/2032		2/15/2032	4.86%	0.25	8/15/2032	4.84%	0.75	4.85%
6/30/2033		2/15/2033	4.82%	0.25	8/15/2033	4.83%	0.75	4.83%
6/30/2034		2/15/2034	4.81%	0.25	8/15/2034	4.79%	0.75	4.79%
6/30/2035		2/15/2035	4.81%	0.25	8/15/2035	4.81%	0.75	4.81%
6/30/2036		2/15/2036	4.84%	0.25	8/15/2036	4.87%	0.75	4.86%

Sources and Notes:

[2]: Yield from Table B-2 for securities with maturity dates matching [1].

[3]: For dates with no exact match, latest maturity from Table B-2 prior to [1].

[4]: Yield from Table B-2 at [3].

[5]: Ratio of days between [1] and [6] to days between [3] and [6].

[6]: Next maturity from Table B-2 after [3].

[7]: Yield from Table B-2 at [6].

[8]: Ratio of days between [3] and [1] to days between [3] and [6].

[9]: Equal to [2] when available. Otherwise equal to a weighted average calculated as  $[4]*[5]+[7]*[8]$ .

**Table B-4**  
**Present Value Factors**

Year	Annualized Yield to June 30 Maturity	Years from Settlement Date to June 30	Annual Return from July 1, 2008 to June 30	Years from 2008	Factor to Present Value to June 30, 2008
[1]	[2]	[3]	[4]	[5]	[6]
2008	4.73%	1.17	--	0	1.000
2009	4.74%	2.17	4.74%	1	0.955
2010	4.55%	3.16	4.45%	2	0.917
2011	4.50%	4.16	4.41%	3	0.878
2012	4.40%	5.17	4.30%	4	0.845
2013	4.56%	6.17	4.52%	5	0.802
2014	4.63%	7.16	4.61%	6	0.763
2015	4.68%	8.16	4.67%	7	0.726
2016	4.75%	9.17	4.75%	8	0.690
2017	4.78%	10.17	4.79%	9	0.656
2018	4.84%	11.16	4.85%	10	0.623
2019	4.91%	12.16	4.93%	11	0.589
2020	4.97%	13.17	5.00%	12	0.557
2021	5.01%	14.16	5.04%	13	0.528
2022	5.02%	15.16	5.04%	14	0.502
2023	5.02%	16.16	5.04%	15	0.478
2024	5.04%	17.17	5.06%	16	0.454
2025	5.04%	18.16	5.06%	17	0.432
2026	5.03%	19.16	5.05%	18	0.412
2027	5.02%	20.16	5.04%	19	0.393
2028	4.99%	21.17	5.01%	20	0.376
2029	4.98%	22.16	4.99%	21	0.360
2030	4.95%	23.16	4.96%	22	0.345
2031	4.88%	24.16	4.89%	23	0.334
2032	4.85%	25.16	4.85%	24	0.321
2033	4.83%	26.16	4.83%	25	0.307
2034	4.79%	27.16	4.80%	26	0.296
2035	4.81%	28.16	4.81%	27	0.281
2036	4.86%	29.16	4.87%	28	0.264
2037			4.87%	29	0.252
2038			4.87%	30	0.240

**Table B-4  
Present Value Factors**

Year	Annualized Yield to June 30 Maturity	Years from Settlement Date to June 30	Annual Return from July 1, 2008 to June 30	Years from 2008	Factor to Present Value to June 30, 2008
[1]	[2]	[3]	[4]	[5]	[6]
2039			4.87%	31	0.229
2040			4.87%	32	0.219
2041			4.87%	33	0.208
2042			4.87%	34	0.199
2043			4.87%	35	0.190
2044			4.87%	36	0.181
2045			4.87%	37	0.172
2046			4.87%	38	0.164
2047			4.87%	39	0.157
2048			4.87%	40	0.149
2049			4.87%	41	0.143
2050			4.87%	42	0.136
2051			4.87%	43	0.130
2052			4.87%	44	0.124
2053			4.87%	45	0.118
2054			4.87%	46	0.112
2055			4.87%	47	0.107
2056			4.87%	48	0.102
2057			4.87%	49	0.097
2058			4.87%	50	0.093
2059			4.87%	51	0.089
2060			4.87%	52	0.084
2061			4.87%	53	0.081
2062			4.87%	54	0.077
2063			4.87%	55	0.073
2064			4.87%	56	0.070
2065			4.87%	57	0.067
2066			4.87%	58	0.064
2067			4.87%	59	0.061
2068			4.87%	60	0.058
2069			4.87%	61	0.055

**Table B-4**  
**Present Value Factors**

Year	Annualized Yield to June 30 Maturity	Years from Settlement Date to June 30	Annual Return from July 1, 2008 to June 30	Years from 2008	Factor to Present Value to June 30, 2008
[1]	[2]	[3]	[4]	[5]	[6]
2070			4.87%	62	0.053
2071			4.87%	63	0.050
2072			4.87%	64	0.048
2073			4.87%	65	0.046
2074			4.87%	66	0.043
2075			4.87%	67	0.041
2076			4.87%	68	0.039
2077			4.87%	69	0.038
2078			4.87%	70	0.036
2079			4.87%	71	0.034
2080			4.87%	72	0.033
2081			4.87%	73	0.031
2082			4.87%	74	0.030
2083			4.87%	75	0.028
2084			4.87%	76	0.027
2085			4.87%	77	0.026
2086			4.87%	78	0.025
2087			4.87%	79	0.023
2088			4.87%	80	0.022
2089			4.87%	81	0.021
2090			4.87%	82	0.020
2091			4.87%	83	0.019
2092			4.87%	84	0.018
2093			4.87%	85	0.018
2094			4.87%	86	0.017
2095			4.87%	87	0.016
2096			4.87%	88	0.015
2097			4.87%	89	0.015
2098			4.87%	90	0.014
2099			4.87%	91	0.013

**Table B-4**  
**Present Value Factors**

Year	Annualized Yield to June 30 Maturity	Years from Settlement Date to June 30	Annual Return from July 1, 2008 to June 30	Years from 2008	Factor to Present Value to June 30, 2008
[1]	[2]	[3]	[4]	[5]	[6]
2100			4.87%	92	0.013
2101			4.87%	93	0.012
2102			4.87%	94	0.011
2103			4.87%	95	0.011
2104			4.87%	96	0.010
2105			4.87%	97	0.010
2106			4.87%	98	0.009
2107			4.87%	99	0.009
2108			4.87%	100	0.009
Total return from Settlement Date to June 30, 2008 based on an annual yield of 4.73%:				5.5%	Note Number [7]
Settlement Date:				May 1, 2007	[8]

Sources and Notes:

[2]: Yield from Table B-3.

[3]: Calculated as the years from [8] to June 30 of the given year, using the actual number of days in each month and each year (i.e. actual/actual).

[4]: Through 2036, calculated as  $((1 + [2])^{[3]} / (1 + [7]))^{1 / ([3] - 2008 \text{ value of } [3])} - 1$ . Thereafter set equal to value of [4] for 2036.

[5]: Calculated as [1] - 2008.

[6]: Calculated as  $1 / (1 + [4])^{[5]}$ .

[7]: Calculated as  $(1 + 2008 \text{ value of } [2])^{(2008 \text{ value of } [3])} - 1$ .

[8]: The settlement date is the as-of date from Table B-1 plus the number of non-business days between the as-of date and the next business day, if applicable, plus one day to settle. In this case, the as-of date falls on a Monday so the settlement date is one day after the as-of date.

## **APPENDIX D**

### **Tables Supporting Cost Estimation**

**Table D-1**  
**Summary of Annual**  
**Construction Cost Index**

Source: Engineering News Record

Year	CCI	
	Index	% Change
1990	4,732	2.5%
1991	4,835	2.2%
1992	4,985	3.1%
1993	5,210	4.5%
1994	5,408	3.8%
1995	5,471	1.2%
1996	5,620	2.7%
1997	5,826	3.7%
1998	5,920	1.6%
1999	6,059	2.3%
2000	6,221	2.7%
2001	6,343	2.0%
2002	6,538	3.1%
2003	6,694	2.4%
2004	7,115	6.3%
2005	7,446	4.7%
2006	7,751	4.1%
2007	7,939	2.4%

\*

\*June 2007.



**Table D-2**  
**Summary of Future**  
**Inflation Rates**

Source: Blue Chip Indicators  
March 10, 2007

<b>Year</b>	<b>Forecasted CPI</b>	<b>Inflation Factor</b>
2008	2.30%	1.023
2009	2.30%	1.047
2010	2.30%	1.071
2011	2.30%	1.095
2012	2.30%	1.120
2013	2.30%	1.146
2014	2.30%	1.173
2015	2.30%	1.200
2016	2.30%	1.227
2017	2.30%	1.255
2018	2.30%	1.284
2019	2.30%	1.314
2020	2.30%	1.344
2021	2.30%	1.375
2022	2.30%	1.406
2023	2.30%	1.439
2024	2.30%	1.472
2025	2.30%	1.506
2026	2.30%	1.540
2027	2.30%	1.576
2028	2.30%	1.612
2029	2.30%	1.649
2030	2.30%	1.687
2031	2.30%	1.726
2032	2.30%	1.766
2033	2.30%	1.806
2034	2.30%	1.848
2035	2.30%	1.890
2036	2.30%	1.934
2037	2.30%	1.978
2038	2.30%	2.024
2039	2.30%	2.070
2040	2.30%	2.118
2041	2.30%	2.167
2042	2.30%	2.216
2043	2.30%	2.267
2044	2.30%	2.320
2045	2.30%	2.373
2046	2.30%	2.427
2047	2.30%	2.483
2048	2.30%	2.540
2049	2.30%	2.599
2050	2.30%	2.659
2051	2.30%	2.720
2052	2.30%	2.782
2053	2.30%	2.846
2054	2.30%	2.912
2055	2.30%	2.979
2056	2.30%	3.047
2057	2.30%	3.117
2058	2.30%	3.189
2059	2.30%	3.262
2060	2.30%	3.337
2061	2.30%	3.414

**Table D-2**  
**Summary of Future**  
**Inflation Rates**

Source: Blue Chip Indicators  
March 10, 2007

<b>Year</b>	<b>Forecasted CPI</b>	<b>Inflation Factor</b>
2062	2.30%	3.493
2063	2.30%	3.573
2064	2.30%	3.655
2065	2.30%	3.739
2066	2.30%	3.825
2067	2.30%	3.913
2068	2.30%	4.003
2069	2.30%	4.095
2070	2.30%	4.190
2071	2.30%	4.286
2072	2.30%	4.384
2073	2.30%	4.485
2074	2.30%	4.588
2075	2.30%	4.694
2076	2.30%	4.802
2077	2.30%	4.912
2078	2.30%	5.025
2079	2.30%	5.141
2080	2.30%	5.259
2081	2.30%	5.380
2082	2.30%	5.504
2083	2.30%	5.631
2084	2.30%	5.760
2085	2.30%	5.892
2086	2.30%	6.028
2087	2.30%	6.167
2088	2.30%	6.309
2089	2.30%	6.454
2090	2.30%	6.602
2091	2.30%	6.754
2092	2.30%	6.909
2093	2.30%	7.068
2094	2.30%	7.231
2095	2.30%	7.397
2096	2.30%	7.567
2097	2.30%	7.741
2098	2.30%	7.919
2099	2.30%	8.101
2100	2.30%	8.288
2101	2.30%	8.478
2102	2.30%	8.673
2103	2.30%	8.873
2104	2.30%	9.077
2105	2.30%	9.286
2106	2.30%	9.499

**Table D-3: Summary of Estimated Future Annual Costs -- Coeur d'Alene Basin**

Activity	Estimate Year	Adjustment Factor	Estimation Factor	Source	Total	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
						1	2	3	4	5	6	7	8	9	10	11	12
Inflation Factor						1.000	1.023	1.047	1.071	1.095	1.120	1.146	1.173	1.200	1.227	1.255	1.284
Discount Factor						1.047	1.000	0.955	0.917	0.878	0.845	0.802	0.763	0.726	0.690	0.656	0.623
<b>Costs in Estimate Year's Dollars</b>																	
Human Health Capital	2006*			D-4	136,991,218	34,247,804	34,247,804	34,247,804	34,247,804	-	-	-	-	-	-	-	-
Human Health O&M	2006*			D-4	60,729,627	657,326	710,392	804,788	677,991	677,991	662,358	646,158	772,954	646,158	646,158	630,525	614,324
Ecological Capital - Upper Basin	2006*			D-5	550,842,792	-	27,542,140	27,542,140	27,542,140	27,542,140	27,542,140	27,542,140	27,542,140	27,542,140	27,542,140	27,542,140	27,542,140
Ecological O&M - Upper Basin	2006*			D-5	689,133,551	-	384,991	769,982	1,154,972	1,539,963	1,924,954	2,309,945	2,694,936	3,079,926	3,464,917	3,849,908	4,234,899
Ecological Capital - Lower Basin	2006*			D-6	876,568,807	-	-	-	-	-	-	3,264,759	3,264,759	3,264,759	3,264,759	3,264,759	24,060,894
Ecological O&M - Lower Basin	2006*			D-6	337,763,112	-	-	-	-	-	-	-	-	-	-	-	83,710
Ecological Capital - Spokane River	2006*			D-7	10,588,202	2,647,050	2,647,050	2,647,050	2,647,050	-	-	-	-	-	-	-	-
Ecological O&M - Spokane River	2006*			D-7	12,241,602	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416
Lake Management Plan	2007		10.00%	[1]	5,121,923	-	-	-	-	-	-	-	-	-	-	-	-
Five-Year Review	2007			[2]	30,000,000	-	-	-	1,500,000	-	-	-	-	1,500,000	-	-	-
Subtotal EPA Costs					2,709,980,833	37,674,597	65,654,794	66,134,180	67,892,374	29,882,510	30,251,868	33,885,417	34,397,205	36,155,399	35,040,390	35,409,748	56,658,383
EPA Oversight		2.30%		[3]	62,329,559	866,516	1,510,060	1,521,086	1,561,525	687,298	695,793	779,365	791,136	831,574	805,929	814,424	1,303,143
EPA/State/Tribe Consulting/Collaboration		2.30%		[3]	62,329,559	866,516	1,510,060	1,521,086	1,561,525	687,298	695,793	779,365	791,136	831,574	805,929	814,424	1,303,143
Subtotal Oversight Costs					124,659,118	1,733,031	3,020,121	3,042,172	3,123,049	1,374,595	1,391,586	1,558,729	1,582,271	1,663,148	1,611,858	1,628,848	2,606,286
Total EPA Direct Costs					2,834,639,951	39,407,629	68,674,914	69,176,352	71,015,423	31,257,106	31,643,454	35,444,147	35,979,476	37,818,547	36,652,248	37,038,596	59,264,669
EPA Indirect Costs			33.49%	[4]	949,320,920	13,197,615	22,999,229	23,167,160	23,783,065	10,468,005	10,597,393	11,870,245	12,049,526	12,665,432	12,274,838	12,404,226	19,847,738
<b>Total Costs in Estimate Year's Dollars</b>					<b>3,783,960,871</b>	<b>52,605,244</b>	<b>91,674,143</b>	<b>92,343,512</b>	<b>94,798,489</b>	<b>41,725,110</b>	<b>42,240,847</b>	<b>47,314,391</b>	<b>48,029,002</b>	<b>50,483,979</b>	<b>48,927,086</b>	<b>49,442,822</b>	<b>79,112,407</b>
<b>Costs in Year 2007 Dollars</b>																	
Human Health Capital	2007	1.006		D-4	137,876,937	34,469,234	34,469,234	34,469,234	34,469,234	-	-	-	-	-	-	-	-
Human Health O&M	2007	1.006		D-4	61,122,275	661,576	714,985	809,991	682,375	682,375	666,641	650,336	777,952	650,336	650,336	634,602	618,296
Ecological Capital - Upper Basin	2007	1.006		D-5	554,404,276	-	27,720,214	27,720,214	27,720,214	27,720,214	27,720,214	27,720,214	27,720,214	27,720,214	27,720,214	27,720,214	27,720,214
Ecological O&M - Upper Basin	2007	1.006		D-5	693,589,156	-	387,480	774,960	1,162,440	1,549,920	1,937,400	2,324,880	2,712,360	3,099,840	3,487,320	3,874,800	4,262,280
Ecological Capital - Lower Basin	2007	1.006		D-6	882,236,278	-	-	-	-	-	-	3,285,867	3,285,867	3,285,867	3,285,867	3,285,867	24,216,460
Ecological O&M - Lower Basin	2007	1.006		D-6	339,946,925	-	-	-	-	-	-	-	-	-	-	-	84,251
Ecological Capital - Spokane River	2007	1.006		D-7	10,656,660	2,664,165	2,664,165	2,664,165	2,664,165	-	-	-	-	-	-	-	-
Ecological O&M - Spokane River	2007	1.006		D-7	12,320,750	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208
Lake Management Plan	2007	1.000	10.00%	[1]	5,121,923	-	-	-	-	-	-	-	-	-	-	-	-
Five-Year Review	2007	1.000		[2]	30,000,000	-	-	-	1,500,000	-	-	-	-	1,500,000	-	-	-
Subtotal EPA Costs	2007				2,727,275,179	37,918,183	66,079,286	66,561,771	68,321,635	30,075,716	30,447,462	34,104,504	34,619,600	36,379,464	35,266,944	35,638,690	57,024,709
EPA Oversight	2007		2.30%	[3]	62,727,329	872,118	1,519,824	1,530,921	1,571,398	691,741	700,292	784,404	796,251	836,728	811,140	819,690	1,311,568
EPA/State/Tribe Consulting/Collaboration	2007		2.30%	[3]	62,727,329	872,118	1,519,824	1,530,921	1,571,398	691,741	700,292	784,404	796,251	836,728	811,140	819,690	1,311,568
Subtotal Oversight Costs	2007				125,454,658	1,744,236	3,039,647	3,061,841	3,142,795	1,383,483	1,400,583	1,568,807	1,592,502	1,673,455	1,622,279	1,639,380	2,623,137
Total EPA Direct Costs	2007				2,852,729,838	39,662,420	69,118,933	69,623,613	71,464,431	31,459,199	31,848,045	35,673,311	36,212,102	38,052,919	36,889,224	37,278,070	59,647,846
EPA Indirect Costs	2007		33.49%	[4]	955,379,223	13,282,944	23,147,931	23,316,948	23,933,438	10,535,686	10,665,910	11,946,992	12,127,433	12,743,923	12,354,201	12,484,426	19,976,064
<b>Total Costs in Year 2007 Dollars</b>	2007				<b>3,808,109,060</b>	<b>52,945,364</b>	<b>92,266,864</b>	<b>92,940,561</b>	<b>95,397,868</b>	<b>41,994,885</b>	<b>42,513,956</b>	<b>47,620,303</b>	<b>48,339,535</b>	<b>50,796,842</b>	<b>49,243,424</b>	<b>49,762,495</b>	<b>79,623,909</b>
<b>Costs in PV Year 2008 Dollars</b>																	
Human Health Capital	2008			D-4	139,629,327	36,099,629	35,262,027	34,440,297	33,827,374	-	-	-	-	-	-	-	-
Human Health O&M	2008			D-4	24,633,763	692,869	731,430	809,311	669,668	656,531	631,178	597,443	695,864	566,692	550,342	522,769	494,368
Ecological Capital - Upper Basin	2008			D-5	451,343,727	-	28,357,779	27,696,943	27,204,029	26,670,351	26,245,590	25,465,679	24,795,231	24,154,934	23,458,021	22,835,242	22,164,102
Ecological O&M - Upper Basin	2008			D-5	229,825,346	-	396,392	774,309	1,140,794	1,491,219	1,834,337	2,135,793	2,426,157	2,701,149	2,951,118	3,191,966	3,407,968
Ecological Capital - Lower Basin	2008			D-6	507,096,064	-	-	-	-	-	-	3,018,622	2,939,149	2,863,250	2,780,640	2,706,818	19,362,625
Ecological O&M - Lower Basin	2008			D-6	89,760,289	-	-	-	-	-	-	-	-	-	-	-	67,364
Ecological Capital - Spokane River	2008			D-7	10,792,104	2,790,180	2,725,441	2,661,928	2,614,555	-	-	-	-	-	-	-	-
Ecological O&M - Spokane River	2008			D-7	4,826,506	129,035	126,041	123,104	120,913	118,541	116,653	113,187	110,207	107,361	104,263	101,495	98,512
Lake Management Plan	2008		10.00%	[1]	1,431,713	-	-	-	-	-	-	-	-	-	-	-	-
Five-Year Review	2008			[2]	11,455,130	-	-	-	1,472,068	-	-	-	-	1,307,075	-	-	-
Subtotal EPA Costs	2008				1,470,793,968	39,711,713	67,599,110	66,505,893	67,049,401	28,936,642	28,827,757	31,330,724	30,966,608	31,700,461	29,844,384	29,358,291	45,594,940
EPA Oversight	2008		2.30%	[3]	33,828,261	913,369	1,554,780	1,529,636	1,542,136	665,543	663,038	720,607	712,232	729,111	686,421	675,241	1,048,684
EPA/State/Tribe Consulting/Collaboration	2008		2.30%	[3]	33,828,261	913,369	1,554,780	1,529,636	1,542,136	665,543	663,038	720,607	712,232	729,111	686,421	675,241	1,048,684
Subtotal Oversight Costs	2008				67,656,523	1,826,739	3,109,559	3,059,271	3,084,272	1,331,086	1,326,077	1,441,213	1,424,464	1,458,221	1,372,842	1,350,481	2,097,367
Total EPA Direct Costs	2008				1,538,450,491	41,538,452	70,708,669	69,565,164	70,133,674	30,267,727	30,153,834	32,771,937	32,391,072	33,158,682	31,217,226	30,708,772	47,692,307
EPA Indirect Costs	2008		33.49%	[4]	515,227,069	13,911,228	23,680,333	23,297,373	23,487,767	10,136,662	10,098,519	10,975,322	10,847,770	11,104,843	10,454,649	10,284,368	15,972,154
<b>Total Costs in PV Year 2008 Dollars</b>	2008				<b>2,053,677,560</b>	<b>55,449,680</b>	<b>94,389,002</b>	<b>92,862,537</b>	<b>93,621,441</b>	<b>40,404,389</b>	<b>40,252,353</b>	<b>43,747,259</b>	<b>43,238,842</b>	<b>44,263,525</b>	<b>41,671,874</b>	<b>40,993,140</b>	<b>63,664,461</b>

**Sources:**

- [1] Final Feasibility Study Report, Part 3, Ecological Alternatives, October 2001, p. 8-20.
  - [2] Estimate based on 2005 Box Five Year Review Cost. See file "04\_2007-04-09\_Itemized\_Cost\_Summary\_Five\_Year\_Review.pdf," Bates Number 2EPASE000015.
  - [3] EPA estimate based on historical costs. See file pic26031.jpg.
  - [4] Expert Report of Thomas De Hoff, May 2, 2007, p. 13.
- 2006\* = December 2006

**Table D-3: Summary of Estimated Future Annual Costs -- Coeur d'Alene Basin**

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Activity	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
Inflation Factor	1.314	1.344	1.375	1.406	1.439	1.472	1.506	1.540	1.576	1.612	1.649	1.687	1.726	1.766	1.806	1.848	1.890
Discount Factor	0.589	0.557	0.528	0.502	0.478	0.454	0.432	0.412	0.393	0.376	0.360	0.345	0.334	0.321	0.307	0.296	0.281
Costs in Estimate Year's Dollars																	
Human Health Capital	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Human Health O&M	741,121	614,324	614,324	593,303	593,303	720,099	593,303	593,303	582,792	573,028	699,824	573,028	573,028	573,028	568,145	694,942	568,145
Ecological Capital - Upper Basin	27,542,140	27,542,140	27,542,140	27,542,140	27,542,140	27,542,140	27,542,140	27,542,140	27,542,140	27,542,140	-	-	-	-	-	-	-
Ecological O&M - Upper Basin	4,619,890	5,004,881	5,389,871	5,774,862	6,159,853	6,544,844	6,929,835	7,314,825	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816
Ecological Capital - Lower Basin	24,060,894	24,060,894	24,060,894	24,060,894	35,474,188	35,474,188	35,474,188	35,474,188	35,474,188	35,474,188	35,474,188	35,474,188	35,474,188	35,474,188	25,679,911	25,679,911	25,679,911
Ecological O&M - Lower Basin	167,420	251,131	334,841	418,551	632,706	846,860	1,061,014	1,275,169	1,489,323	1,703,478	1,917,632	2,131,786	2,345,941	2,560,095	2,690,539	2,820,984	2,951,428
Ecological Capital - Spokane River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ecological O&M - Spokane River	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416
Lake Management Plan	-	-	-	-	-	-	-	-	-	-	-	250,323	64,100	64,100	64,100	64,100	64,100
Five-Year Review	-	1,500,000	-	-	-	-	1,500,000	-	-	-	-	1,500,000	-	-	-	-	1,500,000
Subtotal EPA Costs	57,253,881	59,095,785	58,064,487	58,512,166	70,524,605	71,250,547	73,222,896	72,322,041	72,910,675	45,572,925	45,913,876	47,751,557	46,279,489	46,493,643	36,824,928	37,082,168	38,585,816
EPA Oversight	1,316,839	1,359,203	1,335,483	1,345,780	1,622,066	1,638,763	1,684,127	1,663,407	1,676,946	1,048,177	1,056,019	1,098,286	1,064,428	1,069,354	846,973	852,890	887,474
EPA/State/Tribe Consulting/Collaboration	1,316,839	1,359,203	1,335,483	1,345,780	1,622,066	1,638,763	1,684,127	1,663,407	1,676,946	1,048,177	1,056,019	1,098,286	1,064,428	1,069,354	846,973	852,890	887,474
Subtotal Oversight Costs	2,633,679	2,718,406	2,670,966	2,691,560	3,244,132	3,277,525	3,368,253	3,326,814	3,353,891	2,096,355	2,112,038	2,196,572	2,128,856	2,138,708	1,693,947	1,705,780	1,774,948
Total EPA Direct Costs	59,887,559	61,814,192	60,735,453	61,203,726	73,768,737	74,528,072	76,591,149	75,648,855	76,264,566	47,669,280	48,025,914	49,948,129	48,408,345	48,632,351	38,518,874	38,787,948	40,360,764
EPA Indirect Costs	20,056,344	20,701,573	20,340,303	20,497,128	24,705,150	24,959,451	25,650,376	25,334,801	25,541,003	15,964,442	16,083,879	16,727,628	16,211,955	16,286,974	12,899,971	12,990,084	13,516,820
Total Costs in Estimate Year's Dollars	79,943,903	82,515,764	81,075,756	81,700,854	98,473,887	99,487,523	102,241,525	100,983,656	101,805,570	63,633,722	64,109,793	66,675,758	64,620,300	64,919,325	51,418,845	51,778,032	53,877,583
Costs in Year 2007 Dollars																	
Human Health Capital	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Human Health O&M	745,912	618,296	618,296	597,139	597,139	724,755	597,139	597,139	586,561	576,733	704,349	576,733	576,733	576,733	571,819	699,435	571,819
Ecological Capital - Upper Basin	27,720,214	27,720,214	27,720,214	27,720,214	27,720,214	27,720,214	27,720,214	27,720,214	27,720,214	27,720,214	-	-	-	-	-	-	-
Ecological O&M - Upper Basin	4,649,760	5,037,240	5,424,720	5,812,200	6,199,680	6,587,160	6,974,640	7,362,120	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600
Ecological Capital - Lower Basin	24,216,460	24,216,460	24,216,460	24,216,460	35,703,547	35,703,547	35,703,547	35,703,547	35,703,547	35,703,547	35,703,547	35,703,547	35,703,547	35,703,547	25,845,945	25,845,945	25,845,945
Ecological O&M - Lower Basin	168,503	252,754	337,006	421,257	636,796	852,335	1,067,874	1,283,413	1,498,952	1,714,491	1,930,030	2,145,570	2,361,109	2,576,648	2,707,935	2,839,223	2,970,510
Ecological Capital - Spokane River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ecological O&M - Spokane River	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208
Lake Management Plan	-	-	-	-	-	-	-	-	-	-	-	250,323	64,100	64,100	64,100	64,100	64,100
Five-Year Review	-	1,500,000	-	-	-	-	1,500,000	-	-	-	-	1,500,000	-	-	-	-	1,500,000
Subtotal EPA Costs	57,624,057	59,468,172	58,439,903	58,890,478	70,980,583	71,711,218	73,686,621	72,789,640	73,382,081	45,867,578	46,210,733	48,048,979	46,578,295	46,793,834	37,062,605	37,321,509	38,825,181
EPA Oversight	1,325,353	1,367,768	1,344,118	1,354,481	1,632,553	1,649,358	1,694,792	1,674,162	1,687,788	1,054,954	1,062,847	1,105,127	1,071,301	1,076,258	852,440	858,395	892,979
EPA/State/Tribe Consulting/Collaboration	1,325,353	1,367,768	1,344,118	1,354,481	1,632,553	1,649,358	1,694,792	1,674,162	1,687,788	1,054,954	1,062,847	1,105,127	1,071,301	1,076,258	852,440	858,395	892,979
Subtotal Oversight Costs	2,650,707	2,735,536	2,688,236	2,708,962	3,265,107	3,298,716	3,389,585	3,348,323	3,375,576	2,109,909	2,125,694	2,210,253	2,142,602	2,152,516	1,704,880	1,716,789	1,785,958
Total EPA Direct Costs	60,274,763	62,203,708	61,128,139	61,599,440	74,245,690	75,009,934	77,076,206	76,137,964	76,757,656	47,977,487	48,336,427	50,259,232	48,720,897	48,946,350	38,767,485	39,038,299	40,611,139
EPA Indirect Costs	20,186,018	20,832,022	20,471,814	20,629,652	24,864,882	24,864,880	25,120,827	25,812,821	25,498,604	16,067,660	16,187,869	16,831,817	16,316,628	16,392,133	12,983,231	13,073,926	13,600,670
Total Costs in Year 2007 Dollars	80,460,782	83,035,730	81,599,953	82,229,092	99,110,572	100,130,761	102,889,027	101,636,568	102,463,795	64,045,147	64,524,296	67,091,049	65,037,525	65,338,483	51,750,716	52,112,225	54,211,809
Costs in PV Year 2008 Dollars																	
Human Health Capital	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Human Health O&M	577,386	462,887	448,839	421,820	410,666	484,107	388,479	379,125	363,276	349,818	417,761	335,674	332,264	326,630	317,589	382,157	304,077
Ecological Capital - Upper Basin	21,457,299	20,752,735	20,122,906	19,581,618	19,063,813	18,515,963	18,033,834	17,599,633	17,168,027	-	-	-	-	-	-	-	-
Ecological O&M - Upper Basin	3,599,225	3,771,129	3,937,961	4,105,750	4,263,659	4,399,952	4,537,465	4,674,228	4,799,578	4,700,535	4,596,416	4,510,474	4,464,658	4,388,947	4,304,136	4,234,224	4,121,012
Ecological Capital - Lower Basin	18,745,159	18,129,651	17,579,430	17,106,559	24,554,130	23,848,501	23,227,520	22,668,271	22,112,365	21,656,059	21,176,365	20,780,419	20,569,338	20,220,527	14,354,864	14,121,700	13,744,122
Ecological O&M - Lower Basin	130,433	189,225	244,642	297,577	437,939	569,325	694,723	814,842	928,350	1,039,928	1,144,733	1,248,779	1,360,269	1,459,272	1,503,990	1,551,294	1,579,631
Ecological Capital - Spokane River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ecological O&M - Spokane River	95,371	92,239	89,440	87,034	84,733	82,298	80,155	78,225	76,306	74,732	73,076	71,710	70,982	69,778	68,430	67,318	65,518
Lake Management Plan	-	-	-	-	-	-	-	-	-	-	-	145,695	36,929	36,303	35,601	35,023	34,087
Five-Year Review	-	1,122,975	-	-	-	-	975,849	-	-	-	-	873,040	-	-	-	-	797,656
Subtotal EPA Costs	44,604,873	44,520,841	42,423,218	41,600,358	48,814,940	47,900,144	47,938,024	46,214,3									

**Table D-3: Summary of Estimated Future Annual Costs -- Coeur d'Alene Basin**

Activity	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052
	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
Inflation Factor	1.934	1.978	2.024	2.070	2.118	2.167	2.216	2.267	2.320	2.373	2.427	2.483	2.540	2.599	2.659	2.720	2.782
Discount Factor	0.264	0.252	0.240	0.229	0.219	0.208	0.199	0.190	0.181	0.172	0.164	0.157	0.149	0.143	0.136	0.130	0.124
<b>Costs in Estimate Year's Dollars</b>																	
Human Health Capital	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Human Health O&M	568,145	568,145	568,145	694,942	568,145	568,145	568,145	568,145	694,942	568,145	568,145	568,145	568,145	694,942	568,145	568,145	568,145
Ecological Capital - Upper Basin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ecological O&M - Upper Basin	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816
Ecological Capital - Lower Basin	25,679,911	25,679,911	25,679,911	25,679,911	25,679,911	25,679,911	25,679,911	25,679,911	25,679,911	25,679,911	25,679,911	25,679,911	-	-	-	-	-
Ecological O&M - Lower Basin	3,081,872	3,212,316	3,342,760	3,473,205	3,603,649	3,734,093	3,864,537	3,994,981	4,125,425	4,255,870	4,386,314	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758
Ecological Capital - Spokane River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ecological O&M - Spokane River	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416
Lake Management Plan	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100
Five-Year Review	-	-	-	-	1,500,000	-	-	-	-	1,500,000	-	-	-	-	1,500,000	-	-
Subtotal EPA Costs	37,216,260	37,346,704	37,477,149	37,734,389	39,238,037	37,868,481	37,998,925	38,129,369	38,386,610	39,890,258	38,520,702	38,651,146	12,971,236	13,098,032	14,471,236	12,971,236	12,971,236
EPA Oversight	855,974	858,974	861,974	867,891	902,475	870,975	873,975	876,975	882,892	917,476	885,976	888,976	298,338	301,255	332,838	298,338	298,338
EPA/State/Tribe Consulting/Collaboration	855,974	858,974	861,974	867,891	902,475	870,975	873,975	876,975	882,892	917,476	885,976	888,976	298,338	301,255	332,838	298,338	298,338
Subtotal Oversight Costs	1,711,948	1,717,948	1,723,949	1,735,782	1,804,950	1,741,950	1,747,951	1,753,951	1,765,784	1,834,952	1,771,952	1,777,953	596,677	602,509	665,677	596,677	596,677
Total EPA Direct Costs	38,928,208	39,064,653	39,201,097	39,470,171	41,042,987	39,610,431	39,746,876	39,883,320	40,152,394	41,725,210	40,292,654	40,429,099	13,567,912	13,700,541	15,136,912	13,567,912	13,567,912
EPA Indirect Costs	13,037,057	13,082,752	13,128,448	13,218,560	13,745,296	13,265,533	13,311,229	13,356,924	13,447,037	13,973,773	13,494,010	13,539,705	4,543,894	4,588,311	5,069,352	4,543,894	4,543,894
<b>Total Costs in Estimate Year's Dollars</b>	<b>51,965,265</b>	<b>52,147,405</b>	<b>52,329,545</b>	<b>52,688,731</b>	<b>54,788,283</b>	<b>52,875,965</b>	<b>53,058,105</b>	<b>53,240,244</b>	<b>53,599,431</b>	<b>55,698,982</b>	<b>53,786,664</b>	<b>53,968,804</b>	<b>18,111,806</b>	<b>18,288,853</b>	<b>20,206,264</b>	<b>18,111,806</b>	<b>18,111,806</b>
<b>Costs in Year 2007 Dollars</b>																	
Human Health Capital	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Human Health O&M	571,819	571,819	571,819	699,435	571,819	571,819	571,819	571,819	699,435	571,819	571,819	571,819	571,819	699,435	571,819	571,819	571,819
Ecological Capital - Upper Basin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ecological O&M - Upper Basin	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600
Ecological Capital - Lower Basin	25,845,945	25,845,945	25,845,945	25,845,945	25,845,945	25,845,945	25,845,945	25,845,945	25,845,945	25,845,945	25,845,945	25,845,945	-	-	-	-	-
Ecological O&M - Lower Basin	3,101,798	3,233,085	3,364,373	3,495,661	3,626,948	3,758,236	3,889,523	4,020,811	4,152,098	4,283,386	4,414,674	4,545,961	4,545,961	4,545,961	4,545,961	4,545,961	4,545,961
Ecological Capital - Spokane River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ecological O&M - Spokane River	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208
Lake Management Plan	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100
Five-Year Review	-	-	-	-	1,500,000	-	-	-	-	1,500,000	-	-	-	-	1,500,000	-	-
Subtotal EPA Costs	37,456,468	37,587,756	37,719,043	37,977,947	39,481,618	38,112,906	38,244,194	38,375,481	38,634,385	40,138,056	38,769,344	38,900,631	13,054,687	13,182,303	14,554,687	13,054,687	13,054,687
EPA Oversight	861,499	864,518	867,538	873,493	908,077	876,597	879,616	882,636	888,591	923,175	891,695	894,715	300,258	303,193	334,758	300,258	300,258
EPA/State/Tribe Consulting/Collaboration	861,499	864,518	867,538	873,493	908,077	876,597	879,616	882,636	888,591	923,175	891,695	894,715	300,258	303,193	334,758	300,258	300,258
Subtotal Oversight Costs	1,722,998	1,729,037	1,735,076	1,746,986	1,816,154	1,753,194	1,759,233	1,765,272	1,777,182	1,846,351	1,783,390	1,789,429	600,516	606,386	669,516	600,516	600,516
Total EPA Direct Costs	39,179,466	39,316,792	39,454,119	39,724,933	41,297,773	39,866,100	40,003,426	40,140,753	40,411,567	41,984,407	40,552,734	40,690,060	13,655,202	13,788,689	15,224,202	13,655,202	13,655,202
EPA Indirect Costs	13,121,203	13,167,194	13,213,185	13,303,880	13,830,624	13,351,157	13,397,148	13,443,138	13,533,834	14,060,578	13,581,111	13,627,101	4,573,127	4,617,832	5,098,585	4,573,127	4,573,127
<b>Total Costs in Year 2007 Dollars</b>	<b>52,300,669</b>	<b>52,483,986</b>	<b>52,667,304</b>	<b>53,028,812</b>	<b>55,128,397</b>	<b>53,217,256</b>	<b>53,400,574</b>	<b>53,583,892</b>	<b>53,945,400</b>	<b>56,044,985</b>	<b>54,133,844</b>	<b>54,317,162</b>	<b>18,228,330</b>	<b>18,406,521</b>	<b>20,322,788</b>	<b>18,228,330</b>	<b>18,228,330</b>
<b>Costs in PV Year 2008 Dollars</b>																	
Human Health Capital	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Human Health O&M	292,264	285,110	278,131	331,876	264,682	258,203	251,883	245,717	293,198	233,835	228,111	222,528	217,081	259,029	206,584	201,527	196,594
Ecological Capital - Upper Basin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ecological O&M - Upper Basin	3,960,922	3,863,967	3,769,386	3,677,120	3,587,113	3,499,308	3,413,653	3,330,095	3,248,582	3,169,064	3,091,492	3,015,819	2,941,999	2,869,986	2,799,735	2,731,204	2,664,350
Ecological Capital - Lower Basin	13,210,200	12,886,844	12,571,404	12,263,684	11,963,497	11,670,658	11,384,987	11,106,308	10,834,451	10,569,249	10,310,537	10,058,159	-	-	-	-	-
Ecological O&M - Lower Basin	1,585,369	1,612,023	1,636,423	1,658,662	1,678,831	1,697,020	1,713,312	1,727,790	1,740,533	1,751,616	1,761,114	1,769,098	1,725,794	1,683,551	1,642,341	1,602,140	1,562,924
Ecological Capital - Spokane River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ecological O&M - Spokane River	62,973	61,432	59,928	58,461	57,030	55,634	54,272	52,944	51,648	50,384	49,150	47,947	46,774	45,629	44,512	43,422	42,359
Lake Management Plan	32,762	31,960	31,178	30,415	29,670	28,944	28,236	27,545	26,870	26,213	25,571	24,945	24,334	23,739	23,158	22,591	22,038
Five-Year Review	-	-	-	-	694,316	-	-	-	-	613,399	-	-	-	-	541,912	-	-
Subtotal EPA Costs	19,144,490	18,741,337	18,346,450	18,020,218	18,275,139	17,209,767	16,846,343	16,490,399	16,195,282	16,413,759	15,465,976	15,138,496	4,955,982	4,881,932	5,258,241	4,600,884	4,488,265
EPA Oversight	440,323	431,051	421,968	414,465	420,328	395,825	387,466	379,279	372,491	377,516	355,717	348,185	113,988	112,284	120,940	105,820	103,230
EPA/State/Tribe Consulting/Collaboration	440,323	431,051	421,968	414,465	420,328	395,825	387,466	379,279	372,491	377,516	355,717	348,185	113,988	112,284	120,940	105,820	103,230
Subtotal Oversight Costs	880,647	862,101	843,937	828,930	840,656	791,649	774,932	758,558	744,983	755,033	711,435	696,371	227,975	224,569	241,879	211,641	206,460
Total EPA Direct Costs	20,025,137	19,603,438	19,190,386	18,849,148	19,115,796	18,001,417	17,621,275	17,248,957	16,940,265	17,168,791	16,177,411	15,834,867	5,183,957	5,106,501	5,500,121	4,812,525	4,694,725
EPA Indirect Costs	6,706,418	6,565,192	6,426,860	6,312,580	6,401,880	6,028,674	5,901,365	5,776,676	5,673,295	5,749,828	5,417,815	5,303,097	1,736,107	1,710,167	1,841,990	1,611,715	1,572,263
<b>Total Costs in PV Year 2008 Dollars</b>	<b>26,731,555</b>	<b>26,168,630</b>	<b>25,617,247</b>	<b>25,161,728</b>	<b>25,517,676</b>	<b>24,030,091</b>	<b>23,522,640</b>	<b>23,025,633</b>	<b>22,613,560</b>	<b>22,918,620</b>	<b>21,595,226</b>	<b>21,137,964</b>	<b>6,920,065</b>	<b>6,816,668</b>	<b>7,342,111</b>	<b>6,424,239</b>	<b>6,266,989</b>

**Table D-3: Summary of Estimated Future Annual Costs -- Coeur d'Alene Basin**

Activity	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069
Inflation Factor	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
Discount Factor	2.846	2.912	2.979	3.047	3.117	3.189	3.262	3.337	3.414	3.493	3.573	3.655	3.739	3.825	3.913	4.003	4.095
	0.118	0.112	0.107	0.102	0.097	0.093	0.089	0.084	0.081	0.077	0.073	0.070	0.067	0.064	0.061	0.058	0.055
<b>Costs in Estimate Year's Dollars</b>																	
Human Health Capital	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Human Health O&M	568,145	694,942	568,145	568,145	568,145	568,145	694,942	568,145	568,145	568,145	568,145	694,942	568,145	568,145	568,145	568,145	694,942
Ecological Capital - Upper Basin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ecological O&M - Upper Basin	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816
Ecological Capital - Lower Basin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ecological O&M - Lower Basin	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758
Ecological Capital - Spokane River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ecological O&M - Spokane River	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416
Lake Management Plan	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100
Five-Year Review	-	-	1,500,000	-	-	-	-	1,500,000	-	-	-	-	1,500,000	-	-	-	-
Subtotal EPA Costs	12,971,236	13,098,032	14,471,236	12,971,236	12,971,236	12,971,236	13,098,032	14,471,236	12,971,236	12,971,236	12,971,236	13,098,032	14,471,236	12,971,236	12,971,236	12,971,236	13,098,032
EPA Oversight	298,338	301,255	332,838	298,338	298,338	298,338	301,255	332,838	298,338	298,338	298,338	301,255	332,838	298,338	298,338	298,338	301,255
EPA/State/Tribe Consulting/Collaboration	298,338	301,255	332,838	298,338	298,338	298,338	301,255	332,838	298,338	298,338	298,338	301,255	332,838	298,338	298,338	298,338	301,255
Subtotal Oversight Costs	596,677	602,509	665,677	596,677	596,677	596,677	602,509	665,677	596,677	596,677	596,677	602,509	665,677	596,677	596,677	596,677	602,509
Total EPA Direct Costs	13,567,912	13,700,541	15,136,912	13,567,912	13,567,912	13,567,912	13,700,541	15,136,912	13,567,912	13,567,912	13,567,912	13,700,541	15,136,912	13,567,912	13,567,912	13,567,912	13,700,541
EPA Indirect Costs	4,543,894	4,588,311	5,069,352	4,543,894	4,543,894	4,543,894	4,588,311	5,069,352	4,543,894	4,543,894	4,543,894	4,588,311	5,069,352	4,543,894	4,543,894	4,543,894	4,588,311
<b>Total Costs in Estimate Year's Dollars</b>	<b>18,111,806</b>	<b>18,288,853</b>	<b>20,206,264</b>	<b>18,111,806</b>	<b>18,111,806</b>	<b>18,111,806</b>	<b>18,288,853</b>	<b>20,206,264</b>	<b>18,111,806</b>	<b>18,111,806</b>	<b>18,111,806</b>	<b>18,288,853</b>	<b>20,206,264</b>	<b>18,111,806</b>	<b>18,111,806</b>	<b>18,111,806</b>	<b>18,288,853</b>
<b>Costs in Year 2007 Dollars</b>																	
Human Health Capital	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Human Health O&M	571,819	699,435	571,819	571,819	571,819	571,819	699,435	571,819	571,819	571,819	571,819	699,435	571,819	571,819	571,819	571,819	699,435
Ecological Capital - Upper Basin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ecological O&M - Upper Basin	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600
Ecological Capital - Lower Basin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ecological O&M - Lower Basin	4,545,961	4,545,961	4,545,961	4,545,961	4,545,961	4,545,961	4,545,961	4,545,961	4,545,961	4,545,961	4,545,961	4,545,961	4,545,961	4,545,961	4,545,961	4,545,961	4,545,961
Ecological Capital - Spokane River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ecological O&M - Spokane River	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208
Lake Management Plan	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100
Five-Year Review	-	-	1,500,000	-	-	-	-	1,500,000	-	-	-	-	1,500,000	-	-	-	-
Subtotal EPA Costs	13,054,687	13,182,303	14,554,687	13,054,687	13,054,687	13,054,687	13,182,303	14,554,687	13,054,687	13,054,687	13,054,687	13,182,303	14,554,687	13,054,687	13,054,687	13,054,687	13,182,303
EPA Oversight	300,258	303,193	334,758	300,258	300,258	300,258	303,193	334,758	300,258	300,258	300,258	303,193	334,758	300,258	300,258	300,258	303,193
EPA/State/Tribe Consulting/Collaboration	300,258	303,193	334,758	300,258	300,258	300,258	303,193	334,758	300,258	300,258	300,258	303,193	334,758	300,258	300,258	300,258	303,193
Subtotal Oversight Costs	600,516	606,386	669,516	600,516	600,516	600,516	606,386	669,516	600,516	600,516	600,516	606,386	669,516	600,516	600,516	600,516	606,386
Total EPA Direct Costs	13,655,202	13,788,689	15,224,202	13,655,202	13,655,202	13,655,202	13,788,689	15,224,202	13,655,202	13,655,202	13,655,202	13,788,689	15,224,202	13,655,202	13,655,202	13,655,202	13,788,689
EPA Indirect Costs	4,573,127	4,617,832	5,098,585	4,573,127	4,573,127	4,573,127	4,617,832	5,098,585	4,573,127	4,573,127	4,573,127	4,617,832	5,098,585	4,573,127	4,573,127	4,573,127	4,617,832
<b>Total Costs in Year 2007 Dollars</b>	<b>18,228,330</b>	<b>18,406,521</b>	<b>20,322,788</b>	<b>18,228,330</b>	<b>18,228,330</b>	<b>18,228,330</b>	<b>18,406,521</b>	<b>20,322,788</b>	<b>18,228,330</b>	<b>18,228,330</b>	<b>18,228,330</b>	<b>18,406,521</b>	<b>20,322,788</b>	<b>18,228,330</b>	<b>18,228,330</b>	<b>18,228,330</b>	<b>18,406,521</b>
<b>Costs in PV Year 2008 Dollars</b>																	
Human Health Capital	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Human Health O&M	191,782	228,841	182,508	178,041	173,683	169,431	202,171	161,238	157,291	153,441	149,685	178,610	142,447	138,960	135,559	132,241	157,794
Ecological Capital - Upper Basin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ecological O&M - Upper Basin	2,599,133	2,535,512	2,473,448	2,412,904	2,353,842	2,296,225	2,240,019	2,185,188	2,131,700	2,079,521	2,028,619	1,978,963	1,930,522	1,883,267	1,837,169	1,792,200	1,748,331
Ecological Capital - Lower Basin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ecological O&M - Lower Basin	1,524,667	1,487,346	1,450,940	1,415,424	1,380,778	1,346,979	1,314,008	1,281,844	1,250,468	1,219,859	1,190,000	1,160,871	1,132,456	1,104,736	1,077,694	1,051,315	1,025,581
Ecological Capital - Spokane River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ecological O&M - Spokane River	41,322	40,311	39,324	38,362	37,423	36,507	35,613	34,741	33,891	33,061	32,252	31,463	30,693	29,941	29,208	28,493	27,796
Lake Management Plan	21,498	20,972	20,459	19,958	19,470	18,993	18,528	18,075	17,632	17,201	16,780	16,369	15,968	15,577	15,196	14,824	14,461
Five-Year Review	-	-	478,757	-	-	-	-	422,961	-	-	-	-	373,669	-	-	-	-
Subtotal EPA Costs	4,378,403	4,312,983	4,645,436	4,064,688	3,965,194	3,868,135	3,810,339	4,104,048	3,590,982	3,503,083	3,417,335	3,366,275	3,625,754	3,172,482	3,094,827	3,019,073	2,973,963
EPA Oversight	100,703	99,199	106,845	93,488	91,199	88,967	87,638	94,393	82,593	80,571	78,599	77,424	83,392	72,967	71,181	69,439	68,401
EPA/State/Tribe Consulting/Collaboration	100,703	99,199	106,845	93,488	91,199	88,967	87,638	94,393	82,593	80,571	78,599	77,424	83,392	72,967	71,181	69,439	68,401
Subtotal Oversight Costs	201,407	198,397	213,690	186,976	182,399	177,934	175,276	188,786	165,185	161,142	157,197	154,849	166,785	145,934	142,362	138,877	136,802
Total EPA Direct Costs	4,579,809	4,511,380	4,859,126	4,251,664	4,147,593	4,046,069	3,985,615	4,292,834	3,756,167	3,664,225	3,574,533	3,521,124	3,792,539	3,318,416	3,237,189	3,157,950	3,110,765
EPA Indirect Costs	1,533,778	1,510,861	1,627,321	1,423,882	1,389,029	1,355,029	1,334,782	1,437,670	1,257,940	1,227,149	1,197,111	1,179,224	1,270,121	1,111,338	1,084,135	1,057,597	1,041,795
<b>Total Costs in PV Year 2008 Dollars</b>	<b>6,113,587</b>	<b>6,022,241</b>	<b>6,486,447</b>	<b>5,675,546</b>	<b>5,536,622</b>	<b>5,401,098</b>	<b>5,320,398</b>	<b>5,730,504</b>	<b>5,014,107</b>	<b>4,891,373</b>	<b>4,771,644</b>	<b>4,700,348</b>	<b>5,062,661</b>	<b>4,429,754</b>	<b>4,321,324</b>	<b>4,215,547</b>	<b>4,152,561</b>

**Table D-3: Summary of Estimated Future Annual Costs -- Coeur d'Alene Basin**

Activity	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086
Inflation Factor	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
Discount Factor	4.190	4.286	4.384	4.485	4.588	4.694	4.802	4.912	5.025	5.141	5.259	5.380	5.504	5.631	5.760	5.892	6.028
	0.053	0.050	0.048	0.046	0.043	0.041	0.039	0.038	0.036	0.034	0.033	0.031	0.030	0.028	0.027	0.026	0.025
<b>Costs in Estimate Year's Dollars</b>																	
Human Health Capital	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Human Health O&M	568,145	568,145	568,145	568,145	694,942	568,145	568,145	568,145	568,145	694,942	568,145	568,145	568,145	568,145	694,942	568,145	568,145
Ecological Capital - Upper Basin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ecological O&M - Upper Basin	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816
Ecological Capital - Lower Basin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ecological O&M - Lower Basin	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758
Ecological Capital - Spokane River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ecological O&M - Spokane River	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416
Lake Management Plan	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100
Five-Year Review	1,500,000	-	-	-	-	1,500,000	-	-	-	-	1,500,000	-	-	-	-	1,500,000	-
Subtotal EPA Costs	14,471,236	12,971,236	12,971,236	12,971,236	13,098,032	14,471,236	12,971,236	12,971,236	12,971,236	13,098,032	14,471,236	12,971,236	12,971,236	12,971,236	13,098,032	14,471,236	12,971,236
EPA Oversight	332,838	298,338	298,338	298,338	301,255	332,838	298,338	298,338	298,338	301,255	332,838	298,338	298,338	298,338	301,255	332,838	298,338
EPA/State/Tribe Consulting/Collaboration	332,838	298,338	298,338	298,338	301,255	332,838	298,338	298,338	298,338	301,255	332,838	298,338	298,338	298,338	301,255	332,838	298,338
Subtotal Oversight Costs	665,677	596,677	596,677	596,677	602,509	665,677	596,677	596,677	596,677	602,509	665,677	596,677	596,677	596,677	602,509	665,677	596,677
Total EPA Direct Costs	15,136,912	13,567,912	13,567,912	13,567,912	13,700,541	15,136,912	13,567,912	13,567,912	13,567,912	13,700,541	15,136,912	13,567,912	13,567,912	13,567,912	13,700,541	15,136,912	13,567,912
EPA Indirect Costs	5,069,352	4,543,894	4,543,894	4,543,894	4,588,311	5,069,352	4,543,894	4,543,894	4,543,894	4,588,311	5,069,352	4,543,894	4,543,894	4,543,894	4,588,311	5,069,352	4,543,894
<b>Total Costs in Estimate Year's Dollars</b>	<b>20,206,264</b>	<b>18,111,806</b>	<b>18,111,806</b>	<b>18,111,806</b>	<b>18,288,853</b>	<b>20,206,264</b>	<b>18,111,806</b>	<b>18,111,806</b>	<b>18,111,806</b>	<b>18,288,853</b>	<b>20,206,264</b>	<b>18,111,806</b>	<b>18,111,806</b>	<b>18,111,806</b>	<b>18,288,853</b>	<b>20,206,264</b>	<b>18,111,806</b>
<b>Costs in Year 2007 Dollars</b>																	
Human Health Capital	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Human Health O&M	571,819	571,819	571,819	571,819	699,435	571,819	571,819	571,819	571,819	699,435	571,819	571,819	571,819	571,819	699,435	571,819	571,819
Ecological Capital - Upper Basin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ecological O&M - Upper Basin	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600
Ecological Capital - Lower Basin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ecological O&M - Lower Basin	4,545,961	4,545,961	4,545,961	4,545,961	4,545,961	4,545,961	4,545,961	4,545,961	4,545,961	4,545,961	4,545,961	4,545,961	4,545,961	4,545,961	4,545,961	4,545,961	4,545,961
Ecological Capital - Spokane River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ecological O&M - Spokane River	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208
Lake Management Plan	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100
Five-Year Review	1,500,000	-	-	-	-	1,500,000	-	-	-	-	1,500,000	-	-	-	-	1,500,000	-
Subtotal EPA Costs	14,554,687	13,054,687	13,054,687	13,054,687	13,182,303	14,554,687	13,054,687	13,054,687	13,054,687	13,182,303	14,554,687	13,054,687	13,054,687	13,054,687	13,182,303	14,554,687	13,054,687
EPA Oversight	334,758	300,258	300,258	300,258	303,193	334,758	300,258	300,258	300,258	303,193	334,758	300,258	300,258	300,258	303,193	334,758	300,258
EPA/State/Tribe Consulting/Collaboration	334,758	300,258	300,258	300,258	303,193	334,758	300,258	300,258	300,258	303,193	334,758	300,258	300,258	300,258	303,193	334,758	300,258
Subtotal Oversight Costs	669,516	600,516	600,516	600,516	606,386	669,516	600,516	600,516	600,516	606,386	669,516	600,516	600,516	600,516	606,386	669,516	600,516
Total EPA Direct Costs	15,224,202	13,655,202	13,655,202	13,655,202	13,788,689	15,224,202	13,655,202	13,655,202	13,655,202	13,788,689	15,224,202	13,655,202	13,655,202	13,655,202	13,788,689	15,224,202	13,655,202
EPA Indirect Costs	5,098,585	4,573,127	4,573,127	4,573,127	4,617,832	5,098,585	4,573,127	4,573,127	4,573,127	4,617,832	5,098,585	4,573,127	4,573,127	4,573,127	4,617,832	5,098,585	4,573,127
<b>Total Costs in Year 2007 Dollars</b>	<b>20,322,788</b>	<b>18,228,330</b>	<b>18,228,330</b>	<b>18,228,330</b>	<b>18,406,521</b>	<b>20,322,788</b>	<b>18,228,330</b>	<b>18,228,330</b>	<b>18,228,330</b>	<b>18,406,521</b>	<b>20,322,788</b>	<b>18,228,330</b>	<b>18,228,330</b>	<b>18,228,330</b>	<b>18,406,521</b>	<b>20,322,788</b>	<b>18,228,330</b>
<b>Costs in PV Year 2008 Dollars</b>																	
Human Health Capital	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Human Health O&M	125,846	122,766	119,761	116,829	139,405	111,180	108,458	105,804	103,214	123,158	98,223	95,818	93,473	91,185	108,805	86,776	84,652
Ecological Capital - Upper Basin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ecological O&M - Upper Basin	1,705,535	1,663,788	1,623,062	1,583,333	1,544,577	1,506,769	1,469,887	1,433,907	1,398,809	1,364,569	1,331,167	1,298,583	1,266,797	1,235,789	1,205,539	1,176,031	1,147,244
Ecological Capital - Lower Basin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ecological O&M - Lower Basin	1,000,477	975,988	952,098	928,793	906,058	883,880	862,244	841,139	820,549	800,464	780,871	761,757	743,111	724,921	707,177	689,867	672,980
Ecological Capital - Spokane River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ecological O&M - Spokane River	27,116	26,452	25,804	25,173	24,557	23,955	23,369	22,797	22,239	21,695	21,164	20,646	20,140	19,647	19,166	18,697	18,240
Lake Management Plan	14,107	13,762	13,425	13,096	12,776	12,463	12,158	11,860	11,570	11,287	11,011	10,741	10,478	10,222	9,971	9,727	9,489
Five-Year Review	330,121	-	-	-	-	291,648	-	-	-	-	257,659	-	-	-	-	227,631	-
Subtotal EPA Costs	3,203,202	2,802,755	2,734,150	2,667,224	2,627,372	2,829,895	2,476,117	2,415,507	2,356,381	2,321,173	2,500,094	2,187,545	2,133,999	2,081,764	2,050,659	2,208,728	1,932,605
EPA Oversight	73,674	64,463	62,885	61,346	60,430	65,088	56,951	55,557	54,197	53,387	57,502	50,314	49,082	47,881	47,165	50,801	44,450
EPA/State/Tribe Consulting/Collaboration	73,674	64,463	62,885	61,346	60,430	65,088	56,951	55,557	54,197	53,387	57,502	50,314	49,082	47,881	47,165	50,801	44,450
Subtotal Oversight Costs	147,347	128,927	125,771	122,692	120,859	130,175	113,901	111,113	108,394	106,774	115,004	100,627	98,164	95,761	94,330	101,601	88,900
Total EPA Direct Costs	3,350,549	2,931,682	2,859,921	2,789,916	2,748,231	2,960,070	2,590,018	2,526,620	2,464,774	2,427,947	2,615,098	2,288,172	2,232,163	2,177,525	2,144,989	2,310,329	2,021,504
EPA Indirect Costs	1,122,099	981,820	957,787	934,343	920,383	991,327	867,397	846,165	825,453	813,119	875,796	766,309	747,551	729,253	718,357	773,729	677,002
<b>Total Costs in PV Year 2008 Dollars</b>	<b>4,472,648</b>	<b>3,913,502</b>	<b>3,817,708</b>	<b>3,724,259</b>	<b>3,668,613</b>	<b>3,951,397</b>	<b>3,457,415</b>	<b>3,372,785</b>	<b>3,290,227</b>	<b>3,241,066</b>	<b>3,490,894</b>	<b>3,054,481</b>	<b>2,979,714</b>	<b>2,906,778</b>	<b>2,863,346</b>	<b>3,084,059</b>	<b>2,698,506</b>

**Table D-3: Summary of Estimated Future Annual Costs -- Coeur d'Alene Basin**

Activity	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103
Inflation Factor	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97
Discount Factor	6.167	6.309	6.454	6.602	6.754	6.909	7.068	7.231	7.397	7.567	7.741	7.919	8.101	8.288	8.478	8.673	8.873
	0.023	0.022	0.021	0.020	0.019	0.018	0.018	0.017	0.016	0.015	0.015	0.014	0.013	0.013	0.012	0.011	0.011
<b>Costs in Estimate Year's Dollars</b>																	
Human Health Capital	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Human Health O&M	568,145	568,145	694,942	568,145	568,145	568,145	568,145	694,942	568,145	568,145	568,145	568,145	694,942	568,145	568,145	568,145	568,145
Ecological Capital - Upper Basin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ecological O&M - Upper Basin	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816
Ecological Capital - Lower Basin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ecological O&M - Lower Basin	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758
Ecological Capital - Spokane River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ecological O&M - Spokane River	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416
Lake Management Plan	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100
Five-Year Review	-	-	-	1,500,000	-	-	-	-	1,500,000	-	-	-	-	1,500,000	-	-	-
Subtotal EPA Costs	12,971,236	12,971,236	13,098,032	14,471,236	12,971,236	12,971,236	12,971,236	13,098,032	14,471,236	12,971,236	12,971,236	12,971,236	13,098,032	14,471,236	12,971,236	12,971,236	12,971,236
EPA Oversight	298,338	298,338	301,255	332,838	298,338	298,338	298,338	301,255	332,838	298,338	298,338	298,338	301,255	332,838	298,338	298,338	298,338
EPA/State/Tribe Consulting/Collaboration	298,338	298,338	301,255	332,838	298,338	298,338	298,338	301,255	332,838	298,338	298,338	298,338	301,255	332,838	298,338	298,338	298,338
Subtotal Oversight Costs	596,677	596,677	602,509	665,677	596,677	596,677	596,677	602,509	665,677	596,677	596,677	596,677	602,509	665,677	596,677	596,677	596,677
Total EPA Direct Costs	13,567,912	13,567,912	13,700,541	15,136,912	13,567,912	13,567,912	13,567,912	13,700,541	15,136,912	13,567,912	13,567,912	13,567,912	13,700,541	15,136,912	13,567,912	13,567,912	13,567,912
EPA Indirect Costs	4,543,894	4,543,894	4,588,311	5,069,352	4,543,894	4,543,894	4,543,894	4,588,311	5,069,352	4,543,894	4,543,894	4,543,894	4,588,311	5,069,352	4,543,894	4,543,894	4,543,894
<b>Total Costs in Estimate Year's Dollars</b>	<b>18,111,806</b>	<b>18,111,806</b>	<b>18,288,853</b>	<b>20,206,264</b>	<b>18,111,806</b>	<b>18,111,806</b>	<b>18,111,806</b>	<b>18,288,853</b>	<b>20,206,264</b>	<b>18,111,806</b>	<b>18,111,806</b>	<b>18,111,806</b>	<b>18,288,853</b>	<b>20,206,264</b>	<b>18,111,806</b>	<b>18,111,806</b>	<b>18,111,806</b>
<b>Costs in Year 2007 Dollars</b>																	
Human Health Capital	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Human Health O&M	571,819	571,819	699,435	571,819	571,819	571,819	571,819	699,435	571,819	571,819	571,819	571,819	699,435	571,819	571,819	571,819	571,819
Ecological Capital - Upper Basin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ecological O&M - Upper Basin	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600	7,749,600
Ecological Capital - Lower Basin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ecological O&M - Lower Basin	4,545,961	4,545,961	4,545,961	4,545,961	4,545,961	4,545,961	4,545,961	4,545,961	4,545,961	4,545,961	4,545,961	4,545,961	4,545,961	4,545,961	4,545,961	4,545,961	4,545,961
Ecological Capital - Spokane River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ecological O&M - Spokane River	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208	123,208
Lake Management Plan	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100	64,100
Five-Year Review	-	-	-	1,500,000	-	-	-	-	1,500,000	-	-	-	-	1,500,000	-	-	-
Subtotal EPA Costs	13,054,687	13,054,687	13,182,303	14,554,687	13,054,687	13,054,687	13,054,687	13,182,303	14,554,687	13,054,687	13,054,687	13,054,687	13,182,303	14,554,687	13,054,687	13,054,687	13,054,687
EPA Oversight	300,258	300,258	303,193	334,758	300,258	300,258	300,258	303,193	334,758	300,258	300,258	300,258	303,193	334,758	300,258	300,258	300,258
EPA/State/Tribe Consulting/Collaboration	300,258	300,258	303,193	334,758	300,258	300,258	300,258	303,193	334,758	300,258	300,258	300,258	303,193	334,758	300,258	300,258	300,258
Subtotal Oversight Costs	600,516	600,516	606,386	669,516	600,516	600,516	600,516	606,386	669,516	600,516	600,516	600,516	606,386	669,516	600,516	600,516	600,516
Total EPA Direct Costs	13,655,202	13,655,202	13,788,689	15,224,202	13,655,202	13,655,202	13,655,202	13,788,689	15,224,202	13,655,202	13,655,202	13,655,202	13,788,689	15,224,202	13,655,202	13,655,202	13,655,202
EPA Indirect Costs	4,573,127	4,573,127	4,617,832	5,098,585	4,573,127	4,573,127	4,573,127	4,617,832	5,098,585	4,573,127	4,573,127	4,573,127	4,617,832	5,098,585	4,573,127	4,573,127	4,573,127
<b>Total Costs in Year 2007 Dollars</b>	<b>18,228,330</b>	<b>18,228,330</b>	<b>18,406,521</b>	<b>20,322,788</b>	<b>18,228,330</b>	<b>18,228,330</b>	<b>18,228,330</b>	<b>18,406,521</b>	<b>20,322,788</b>	<b>18,228,330</b>	<b>18,228,330</b>	<b>18,228,330</b>	<b>18,406,521</b>	<b>20,322,788</b>	<b>18,228,330</b>	<b>18,228,330</b>	<b>18,228,330</b>
<b>Costs in PV Year 2008 Dollars</b>																	
Human Health Capital	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Human Health O&M	82,579	80,558	96,125	76,663	74,786	72,955	71,170	84,922	67,728	66,070	64,453	62,875	75,025	59,835	58,370	56,942	55,548
Ecological Capital - Upper Basin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ecological O&M - Upper Basin	1,119,162	1,091,768	1,065,044	1,038,974	1,013,542	988,733	964,531	940,921	917,890	895,422	873,504	852,123	831,265	810,917	791,068	771,704	752,815
Ecological Capital - Lower Basin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ecological O&M - Lower Basin	656,507	640,437	624,761	609,468	594,550	579,997	565,800	551,950	538,440	525,260	512,403	499,860	487,625	475,689	464,045	452,686	441,606
Ecological Capital - Spokane River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ecological O&M - Spokane River	17,793	17,358	16,933	16,518	16,114	15,719	15,335	14,959	14,593	14,236	13,887	13,548	13,216	12,892	12,577	12,269	11,969
Lake Management Plan	9,257	9,030	8,809	8,594	8,383	8,178	7,978	7,783	7,592	7,406	7,225	7,048	6,876	6,707	6,543	6,383	6,227
Five-Year Review	-	-	-	201,102	-	-	-	-	177,665	-	-	-	-	156,960	-	-	-
Subtotal EPA Costs	1,885,299	1,839,151	1,811,671	1,951,319	1,707,375	1,665,582	1,624,813	1,600,536	1,723,908	1,508,394	1,471,472	1,435,454	1,414,006	1,523,001	1,332,603	1,299,984	1,268,163
EPA Oversight	43,362	42,300	41,668	44,880	39,270	38,308	37,371	36,812	39,650	34,693	33,844	33,015	32,522	35,029	30,650	29,900	29,168
EPA/State/Tribe Consulting/Collaboration	43,362	42,300	41,668	44,880	39,270	38,308	37,371	36,812	39,650	34,693	33,844	33,015	32,522	35,029	30,650	29,900	29,168
Subtotal Oversight Costs	86,724	84,601	83,337	89,761	78,539	76,617	74,741	73,625	79,300	69,386	67,688	66,031	65,044	70,058	61,300	59,799	58,336
Total EPA Direct Costs	1,972,023	1,923,752	1,895,008	2,041,079	1,785,914	1,742,199	1,699,554	1,674,160	1,803,208	1,577,781	1,539,160	1,501,485	1,479,050	1,593,059	1,393,903	1,359,783	1,326,499
EPA Indirect Costs	660,430	644,265	634,638	683,557	598,103	583,463	569,181	560,676	603,894	528,399	515,465	502,847	495,334	533,515	466,818	455,391	444,245
<b>Total Costs in PV Year 2008 Dollars</b>	<b>2,632,453</b>	<b>2,568,016</b>	<b>2,529,646</b>	<b>2,724,637</b>	<b>2,384,017</b>	<b>2,325,662</b>	<b>2,268,735</b>	<b>2,234,837</b>	<b>2,407,102</b>	<b>2,106,179</b>	<b>2,054,625</b>	<b>2,004,332</b>	<b>1,974,384</b>	<b>2,126,574</b>	<b>1,860,721</b>	<b>1,815,175</b>	<b>1,770,744</b>



**Table D-3: Summary of Estimated Future Annual Costs -- Coeur d'Alene Basin**

Activity	2104	2105	2106
	98	99	100
Inflation Factor	9.077	9.286	9.499
Discount Factor	0.010	0.010	0.009
<b>Costs in Estimate Year's Dollars</b>			
Human Health Capital	-	-	-
Human Health O&M	694,942	568,145	568,145
Ecological Capital - Upper Basin	-	-	-
Ecological O&M - Upper Basin	7,699,816	7,699,816	7,699,816
Ecological Capital - Lower Basin	-	-	-
Ecological O&M - Lower Basin	4,516,758	4,516,758	4,516,758
Ecological Capital - Spokane River	-	-	-
Ecological O&M - Spokane River	122,416	122,416	122,416
Lake Management Plan	64,100	64,100	64,100
Five-Year Review	-	1,500,000	-
Subtotal EPA Costs	13,098,032	14,471,236	12,971,236
EPA Oversight	301,255	332,838	298,338
EPA/State/Tribe Consulting/Collaboration	301,255	332,838	298,338
Subtotal Oversight Costs	602,509	665,677	596,677
Total EPA Direct Costs	13,700,541	15,136,912	13,567,912
EPA Indirect Costs	4,588,311	5,069,352	4,543,894
<b>Total Costs in Estimate Year's Dollars</b>	<b>18,288,853</b>	<b>20,206,264</b>	<b>18,111,806</b>
<b>Costs in Year 2007 Dollars</b>			
Human Health Capital	-	-	-
Human Health O&M	699,435	571,819	571,819
Ecological Capital - Upper Basin	-	-	-
Ecological O&M - Upper Basin	7,749,600	7,749,600	7,749,600
Ecological Capital - Lower Basin	-	-	-
Ecological O&M - Lower Basin	4,545,961	4,545,961	4,545,961
Ecological Capital - Spokane River	-	-	-
Ecological O&M - Spokane River	123,208	123,208	123,208
Lake Management Plan	64,100	64,100	64,100
Five-Year Review	-	1,500,000	-
Subtotal EPA Costs	13,182,303	14,554,687	13,054,687
EPA Oversight	303,193	334,758	300,258
EPA/State/Tribe Consulting/Collaboration	303,193	334,758	300,258
Subtotal Oversight Costs	606,386	669,516	600,516
Total EPA Direct Costs	13,788,689	15,224,202	13,655,202
EPA Indirect Costs	4,617,832	5,098,585	4,573,127
<b>Total Costs in Year 2007 Dollars</b>	<b>18,406,521</b>	<b>20,322,788</b>	<b>18,228,330</b>
<b>Costs in PV Year 2008 Dollars</b>			
Human Health Capital	-	-	-
Human Health O&M	66,282	52,862	51,568
Ecological Capital - Upper Basin	-	-	-
Ecological O&M - Upper Basin	734,387	716,411	698,875
Ecological Capital - Lower Basin	-	-	-
Ecological O&M - Lower Basin	430,796	420,251	409,964
Ecological Capital - Spokane River	-	-	-
Ecological O&M - Spokane River	11,676	11,390	11,111
Lake Management Plan	6,074	5,926	5,781
Five-Year Review	-	138,667	-
Subtotal EPA Costs	1,249,215	1,345,507	1,177,299
EPA Oversight	28,732	30,947	27,078
EPA/State/Tribe Consulting/Collaboration	28,732	30,947	27,078
Subtotal Oversight Costs	57,464	61,893	54,156
Total EPA Direct Costs	1,306,679	1,407,401	1,231,455
EPA Indirect Costs	437,607	471,338	412,414
<b>Total Costs in PV Year 2008 Dollars</b>	<b>1,744,286</b>	<b>1,878,739</b>	<b>1,643,869</b>

**Table D-4: Summary of Estimated Annual Costs for Human Health -- Coeur d'Alene Basin**

Activity	Start Year	Stop Year	Number of Years	Base Value	Total	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
						1	2	3	4	5	6	7	8	9	10	11
<b>Costs in Estimate Year's Dollars</b>																
<b>Capital Costs</b>			4													
<i>Yard Soil, Rights of Way, Etc.</i>																
Lower and Upper Basins	2007	2010	4	103,118,400	103,118,400	25,779,600	25,779,600	25,779,600	25,779,600	-	-	-	-	-	-	-
Repository Construction/Hauling	2007	2010	4	13,095,947	13,095,947	3,273,987	3,273,987	3,273,987	3,273,987	-	-	-	-	-	-	-
Relocation	2007	2010	4	4,252,500	4,252,500	1,063,125	1,063,125	1,063,125	1,063,125	-	-	-	-	-	-	-
Drainage Upgrades	2007	2010	4	1,220,862	1,220,862	305,216	305,216	305,216	305,216	-	-	-	-	-	-	-
Recontamination	2007	2010	4	4,033,836	4,033,836	1,008,459	1,008,459	1,008,459	1,008,459	-	-	-	-	-	-	-
Subtotal Yard Soil Capital Costs					125,721,545	31,430,386	31,430,386	31,430,386	31,430,386	-	-	-	-	-	-	-
<i>Recreation Areas</i>	2007	2010	4	4,837,896	4,837,896	1,209,474	1,209,474	1,209,474	1,209,474	-	-	-	-	-	-	-
<i>House Dust</i> Cleaning	2007	2010	4	4,203,216	4,203,216	1,050,804	1,050,804	1,050,804	1,050,804	-	-	-	-	-	-	-
<i>Drinking Water</i>																
Upper Basin - Inside District	2007	2010	4	27,972	27,972	6,993	6,993	6,993	6,993	-	-	-	-	-	-	-
Upper Basin - Outside District	2007	2010	4	48,635	48,635	12,159	12,159	12,159	12,159	-	-	-	-	-	-	-
Lower Basin - Inside District	2007	2010	4	708,624	708,624	177,156	177,156	177,156	177,156	-	-	-	-	-	-	-
Lower Basin - Outside District	2007	2010	4	1,443,330	1,443,330	360,833	360,833	360,833	360,833	-	-	-	-	-	-	-
Subtotal Drinking Water Capital Costs					2,228,561	557,140	557,140	557,140	557,140	-	-	-	-	-	-	-
Total Capital Costs					136,991,218	34,247,804	34,247,804	34,247,804	34,247,804	-	-	-	-	-	-	-
<b>Operations and Maintenance Costs</b>																
<i>Yard Soil, Rights of Way, Etc.</i>																
Repository O&M				62,924	2,918,478	104,574	157,640	125,239	125,239	125,239	109,606	93,406	93,406	93,406	93,406	77,773
<i>Recreation Areas</i>	2007	2106	100	37,342	3,734,163	37,342	37,342	37,342	37,342	37,342	37,342	37,342	37,342	37,342	37,342	37,342
<i>Drinking Water</i>																
Upper Basin - Inside District	2007	2106	100	-	-	-	-	-	-	-	-	-	-	-	-	-
Upper Basin - Outside District	2007	2106	100	3,239	323,874	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239
Lower Basin - Inside District	2007	2106	100	-	-	-	-	-	-	-	-	-	-	-	-	-
Lower Basin - Outside District	2007	2106	100	6,978	697,765	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978
Subtotal Drinking Water O&M Costs	2007	2106	100		1,021,640	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216
<i>Aquatic Food Sources</i>																
Lead Health Intervention Program	2007	2106	100	21,841	2,184,117	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841
Labor/Equipment/Materials	2007	2106	100	29,448	2,944,793	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448
Fish Sampling	2007	2106	100	126,796	2,535,927	-	-	126,796	-	-	-	-	126,796	-	-	-
Subtotal Aquatic Food Sources O&M Costs					7,664,837	51,289	51,289	178,085	51,289	51,289	51,289	51,289	178,085	51,289	51,289	51,289
Information and Intervention	2007	2106	100	453,905	45,390,509	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905
Total O&M Costs					60,729,627	657,326	710,392	804,788	677,991	677,991	662,358	646,158	772,954	646,158	646,158	630,525
Total Costs					197,720,845	34,905,131	34,958,197	35,052,592	34,925,796	677,991	662,358	646,158	772,954	646,158	646,158	630,525

**Sources:**

- [1] URS Corporation, "Estimated Cleanup Costs for the Coeur d'Alene Basin, Costs Escalated to December 2006 and Pine Creek Costs Excluded," Draft as of June 8, 2007.
- [2] Final Feasibility Study Report, Part 2, Human Health Alternatives, October 2001, Appendix F.  
Costs for activities occurring prior to 1/1/2007 have been removed.

**Table D-4: Summary of Estimated Annual Costs for Human Health -- Coeur d'Alene Basin**

Activity	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
<b>Costs in Estimate Year's Dollars</b>															
<b>Capital Costs</b>															
<i>Yard Soil, Rights of Way, Etc.</i>															
Lower and Upper Basins	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Repository Construction/Hauling	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Relocation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Drainage Upgrades	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Recontamination	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Yard Soil Capital Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Recreation Areas</i>															
<i>House Dust</i> Cleaning	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Drinking Water</i>															
Upper Basin - Inside District	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Upper Basin - Outside District	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lower Basin - Inside District	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lower Basin - Outside District	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Drinking Water Capital Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Capital Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Operations and Maintenance Costs</b>															
<i>Yard Soil, Rights of Way, Etc.</i>															
Repository O&M	61,572	61,572	61,572	61,572	40,551	40,551	40,551	40,551	40,551	30,040	20,275	20,275	20,275	20,275	20,275
<i>Recreation Areas</i>	37,342	37,342	37,342	37,342	37,342	37,342	37,342	37,342	37,342	37,342	37,342	37,342	37,342	37,342	37,342
<i>Drinking Water</i>															
Upper Basin - Inside District	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Upper Basin - Outside District	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239
Lower Basin - Inside District	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lower Basin - Outside District	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978
Subtotal Drinking Water O&M Costs	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216
<i>Aquatic Food Sources</i>															
Lead Health Intervention Program	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841
Labor/Equipment/Materials	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448
Fish Sampling	-	126,796	-	-	-	-	126,796	-	-	-	-	126,796	-	-	-
Subtotal Aquatic Food Sources O&M Cos	51,289	178,085	51,289	51,289	51,289	51,289	178,085	51,289	51,289	51,289	51,289	178,085	51,289	51,289	51,289
Information and Intervention	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905
Total O&M Costs	614,324	741,121	614,324	614,324	593,303	593,303	720,099	593,303	593,303	582,792	573,028	699,824	573,028	573,028	573,028
Total Costs	614,324	741,121	614,324	614,324	593,303	593,303	720,099	593,303	593,303	582,792	573,028	699,824	573,028	573,028	573,028

**Table D-4: Summary of Estimated Annual Costs for Human Health -- Coeur d'Alene Basin**

Activity	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
<b>Costs in Estimate Year's Dollars</b>																
<b>Capital Costs</b>																
<i>Yard Soil, Rights of Way, Etc.</i>																
Lower and Upper Basins	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Repository Construction/Hauling	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Relocation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Drainage Upgrades	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Recontamination	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Yard Soil Capital Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Recreation Areas</i>																
<i>House Dust</i> Cleaning	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Drinking Water</i>																
Upper Basin - Inside District	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Upper Basin - Outside District	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lower Basin - Inside District	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lower Basin - Outside District	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Drinking Water Capital Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Capital Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Operations and Maintenance Costs</b>																
<i>Yard Soil, Rights of Way, Etc.</i>																
Repository O&M	15,393	15,393	15,393	15,393	15,393	15,393	15,393	15,393	15,393	15,393	15,393	15,393	15,393	15,393	15,393	15,393
<i>Recreation Areas</i>																
	37,342	37,342	37,342	37,342	37,342	37,342	37,342	37,342	37,342	37,342	37,342	37,342	37,342	37,342	37,342	37,342
<i>Drinking Water</i>																
Upper Basin - Inside District	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Upper Basin - Outside District	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239
Lower Basin - Inside District	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lower Basin - Outside District	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978
Subtotal Drinking Water O&M Costs	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216
<i>Aquatic Food Sources</i>																
Lead Health Intervention Program	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841
Labor/Equipment/Materials	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448
Fish Sampling	-	126,796	-	-	-	-	126,796	-	-	-	-	126,796	-	-	-	-
Subtotal Aquatic Food Sources O&M Cos	51,289	178,085	51,289	51,289	51,289	51,289	178,085	51,289	51,289	51,289	51,289	178,085	51,289	51,289	51,289	51,289
Information and Intervention	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905
Total O&M Costs	568,145	694,942	568,145	568,145	568,145	568,145	694,942	568,145	568,145	568,145	568,145	694,942	568,145	568,145	568,145	568,145
Total Costs	568,145	694,942	568,145	568,145	568,145	568,145	694,942	568,145	568,145	568,145	568,145	694,942	568,145	568,145	568,145	568,145

**Table D-4: Summary of Estimated Annual Costs for Human Health -- Coeur d'Alene Basin**

Activity	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064
	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58
<b>Costs in Estimate Year's Dollars</b>																
<b>Capital Costs</b>																
<i>Yard Soil, Rights of Way, Etc.</i>																
Lower and Upper Basins	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Repository Construction/Hauling	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Relocation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Drainage Upgrades	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Recontamination	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Yard Soil Capital Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Recreation Areas</i>																
<i>House Dust</i> Cleaning	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Drinking Water</i>																
Upper Basin - Inside District	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Upper Basin - Outside District	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lower Basin - Inside District	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lower Basin - Outside District	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Drinking Water Capital Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Capital Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Operations and Maintenance Costs</b>																
<i>Yard Soil, Rights of Way, Etc.</i>																
Repository O&M	15,393	15,393	15,393	15,393	15,393	15,393	15,393	15,393	15,393	15,393	15,393	15,393	15,393	15,393	15,393	15,393
<i>Recreation Areas</i>																
37,342	37,342	37,342	37,342	37,342	37,342	37,342	37,342	37,342	37,342	37,342	37,342	37,342	37,342	37,342	37,342	37,342
<i>Drinking Water</i>																
Upper Basin - Inside District	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Upper Basin - Outside District	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239
Lower Basin - Inside District	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lower Basin - Outside District	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978
Subtotal Drinking Water O&M Costs	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216
<i>Aquatic Food Sources</i>																
Lead Health Intervention Program	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841
Labor/Equipment/Materials	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448
Fish Sampling	126,796	-	-	-	-	126,796	-	-	-	-	126,796	-	-	-	-	126,796
Subtotal Aquatic Food Sources O&M Cos	178,085	51,289	51,289	51,289	51,289	178,085	51,289	51,289	51,289	51,289	178,085	51,289	51,289	51,289	51,289	178,085
Information and Intervention	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905
Total O&M Costs	694,942	568,145	568,145	568,145	568,145	694,942	568,145	568,145	568,145	568,145	694,942	568,145	568,145	568,145	568,145	694,942
Total Costs	694,942	568,145	568,145	568,145	568,145	694,942	568,145	568,145	568,145	568,145	694,942	568,145	568,145	568,145	568,145	694,942

**Table D-4: Summary of Estimated Annual Costs for Human Health -- Coeur d'Alene Basin**

Activity	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080
	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74
<b>Costs in Estimate Year's Dollars</b>																
<b>Capital Costs</b>																
<i>Yard Soil, Rights of Way, Etc.</i>																
Lower and Upper Basins	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Repository Construction/Hauling	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Relocation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Drainage Upgrades	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Recontamination	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Yard Soil Capital Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Recreation Areas</i>																
<i>House Dust</i> Cleaning																
<i>Drinking Water</i>																
Upper Basin - Inside District	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Upper Basin - Outside District	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lower Basin - Inside District	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lower Basin - Outside District	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Drinking Water Capital Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Capital Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Operations and Maintenance Costs</b>																
<i>Yard Soil, Rights of Way, Etc.</i>																
Repository O&M	15,393	15,393	15,393	15,393	15,393	15,393	15,393	15,393	15,393	15,393	15,393	15,393	15,393	15,393	15,393	15,393
<i>Recreation Areas</i>																
<i>Drinking Water</i>																
Upper Basin - Inside District	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Upper Basin - Outside District	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239
Lower Basin - Inside District	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lower Basin - Outside District	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978
Subtotal Drinking Water O&M Costs	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216
<i>Aquatic Food Sources</i>																
Lead Health Intervention Program	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841
Labor/Equipment/Materials	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448
Fish Sampling	-	-	-	-	126,796	-	-	-	-	126,796	-	-	-	-	126,796	-
Subtotal Aquatic Food Sources O&M Cos	51,289	51,289	51,289	51,289	178,085	51,289	51,289	51,289	51,289	178,085	51,289	51,289	51,289	51,289	178,085	51,289
Information and Intervention	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905
Total O&M Costs	568,145	568,145	568,145	568,145	694,942	568,145	568,145	568,145	568,145	694,942	568,145	568,145	568,145	568,145	694,942	568,145
Total Costs	568,145	568,145	568,145	568,145	694,942	568,145	568,145	568,145	568,145	694,942	568,145	568,145	568,145	568,145	694,942	568,145

**Table D-4: Summary of Estimated Annual Costs for Human Health -- Coeur d'Alene Basin**

Activity	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096
	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
<b>Costs in Estimate Year's Dollars</b>																
<b>Capital Costs</b>																
<i>Yard Soil, Rights of Way, Etc.</i>																
Lower and Upper Basins	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Repository Construction/Hauling	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Relocation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Drainage Upgrades	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Recontamination	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Yard Soil Capital Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Recreation Areas</i>																
<i>House Dust</i> Cleaning	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Drinking Water</i>																
Upper Basin - Inside District	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Upper Basin - Outside District	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lower Basin - Inside District	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lower Basin - Outside District	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Drinking Water Capital Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Capital Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Operations and Maintenance Costs</b>																
<i>Yard Soil, Rights of Way, Etc.</i>																
Repository O&M	15,393	15,393	15,393	15,393	15,393	15,393	15,393	15,393	15,393	15,393	15,393	15,393	15,393	15,393	15,393	15,393
<i>Recreation Areas</i>																
	37,342	37,342	37,342	37,342	37,342	37,342	37,342	37,342	37,342	37,342	37,342	37,342	37,342	37,342	37,342	37,342
<i>Drinking Water</i>																
Upper Basin - Inside District	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Upper Basin - Outside District	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239
Lower Basin - Inside District	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lower Basin - Outside District	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978
Subtotal Drinking Water O&M Costs	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216
<i>Aquatic Food Sources</i>																
Lead Health Intervention Program	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841
Labor/Equipment/Materials	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448
Fish Sampling	-	-	-	126,796	-	-	-	-	126,796	-	-	-	-	126,796	-	-
Subtotal Aquatic Food Sources O&M Cos	51,289	51,289	51,289	178,085	51,289	51,289	51,289	51,289	178,085	51,289	51,289	51,289	51,289	178,085	51,289	51,289
Information and Intervention	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905
Total O&M Costs	568,145	568,145	568,145	694,942	568,145	568,145	568,145	568,145	694,942	568,145	568,145	568,145	568,145	694,942	568,145	568,145
Total Costs	568,145	568,145	568,145	694,942	568,145	568,145	568,145	568,145	694,942	568,145	568,145	568,145	568,145	694,942	568,145	568,145

**Table D-4: Summary of Estimated Annual Costs for Human Health -- Coeur d'Alene Basin**

Activity	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106
	91	92	93	94	95	96	97	98	99	100
<b>Costs in Estimate Year's Dollars</b>										
<b>Capital Costs</b>										
<i>Yard Soil, Rights of Way, Etc.</i>										
Lower and Upper Basins	-	-	-	-	-	-	-	-	-	-
Repository Construction/Hauling	-	-	-	-	-	-	-	-	-	-
Relocation	-	-	-	-	-	-	-	-	-	-
Drainage Upgrades	-	-	-	-	-	-	-	-	-	-
Recontamination	-	-	-	-	-	-	-	-	-	-
Subtotal Yard Soil Capital Costs	-	-	-	-	-	-	-	-	-	-
<i>Recreation Areas</i>										
<i>House Dust</i> - Cleaning	-	-	-	-	-	-	-	-	-	-
<i>Drinking Water</i>										
Upper Basin - Inside District	-	-	-	-	-	-	-	-	-	-
Upper Basin - Outside District	-	-	-	-	-	-	-	-	-	-
Lower Basin - Inside District	-	-	-	-	-	-	-	-	-	-
Lower Basin - Outside District	-	-	-	-	-	-	-	-	-	-
Subtotal Drinking Water Capital Costs	-	-	-	-	-	-	-	-	-	-
Total Capital Costs	-	-	-	-	-	-	-	-	-	-
<b>Operations and Maintenance Costs</b>										
<i>Yard Soil, Rights of Way, Etc.</i>										
Repository O&M	15,393	15,393	15,393	15,393	15,393	15,393	15,393	15,393	15,393	15,393
<i>Recreation Areas</i>										
	37,342	37,342	37,342	37,342	37,342	37,342	37,342	37,342	37,342	37,342
<i>Drinking Water</i>										
Upper Basin - Inside District	-	-	-	-	-	-	-	-	-	-
Upper Basin - Outside District	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239
Lower Basin - Inside District	-	-	-	-	-	-	-	-	-	-
Lower Basin - Outside District	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978	6,978
Subtotal Drinking Water O&M Costs	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216	10,216
<i>Aquatic Food Sources</i>										
Lead Health Intervention Program	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841	21,841
Labor/Equipment/Materials	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448	29,448
Fish Sampling	-	-	126,796	-	-	-	-	126,796	-	-
Subtotal Aquatic Food Sources O&M Cos	51,289	51,289	178,085	51,289	51,289	51,289	51,289	178,085	51,289	51,289
Information and Intervention	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905	453,905
Total O&M Costs	568,145	568,145	694,942	568,145	568,145	568,145	568,145	694,942	568,145	568,145
Total Costs	568,145	568,145	694,942	568,145	568,145	568,145	568,145	694,942	568,145	568,145



**Table D-5: Summary of Estimated Annual Costs for the Upper Basin -- Coeur d'Alene Basin**

Activity	Start Year	Stop Year	Number of Years	Base Value	Total	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
O&M Scaling Factor			20			1 0.00	2 0.05	3 0.10	4 0.15	5 0.20	6 0.25	7 0.30	8 0.35	9 0.40	10 0.45	11 0.50	12 0.55
<b>Costs in Estimate Year's Dollars</b>																	
<b>Construction</b>																	
Upper South Fork Watershed	2008	2027	20	100,980,430	100,980,430	-	5,049,022	5,049,022	5,049,022	5,049,022	5,049,022	5,049,022	5,049,022	5,049,022	5,049,022	5,049,022	5,049,022
Canyon Creek Watershed	2008	2027	20	135,405,620	135,405,620	-	6,770,281	6,770,281	6,770,281	6,770,281	6,770,281	6,770,281	6,770,281	6,770,281	6,770,281	6,770,281	6,770,281
Ninemile Creek Watershed	2008	2027	20	65,760,844	65,760,844	-	3,288,042	3,288,042	3,288,042	3,288,042	3,288,042	3,288,042	3,288,042	3,288,042	3,288,042	3,288,042	3,288,042
Big Creek Watershed	2008	2027	20	33,873,010	33,873,010	-	1,693,651	1,693,651	1,693,651	1,693,651	1,693,651	1,693,651	1,693,651	1,693,651	1,693,651	1,693,651	1,693,651
Moon Creek Watershed	2008	2027	20	3,859,820	3,859,820	-	192,991	192,991	192,991	192,991	192,991	192,991	192,991	192,991	192,991	192,991	192,991
South Fork Watershed	2008	2027	20	210,963,068	210,963,068	-	10,548,153	10,548,153	10,548,153	10,548,153	10,548,153	10,548,153	10,548,153	10,548,153	10,548,153	10,548,153	10,548,153
Subtotal Capital Costs					550,842,792	-	27,542,140	27,542,140	27,542,140	27,542,140	27,542,140	27,542,140	27,542,140	27,542,140	27,542,140	27,542,140	27,542,140
<b>Operations and Maintenance Costs</b>																	
Upper South Fork Watershed	2008	2106	99	803,007	71,869,159	-	40,150	80,301	120,451	160,601	200,752	240,902	281,053	321,203	361,353	401,504	441,654
Canyon Creek Watershed	2008	2106	99	3,723,393	333,243,682	-	186,170	372,339	558,509	744,679	930,848	1,117,018	1,303,188	1,489,357	1,675,527	1,861,697	2,047,866
Ninemile Creek Watershed	2008	2106	99	549,780	49,205,312	-	27,489	54,978	82,467	109,956	137,445	164,934	192,423	219,912	247,401	274,890	302,379
Big Creek Watershed	2008	2106	99	257,077	23,008,428	-	12,854	25,708	38,562	51,415	64,269	77,123	89,977	102,831	115,685	128,539	141,393
Moon Creek Watershed	2008	2106	99	48,350	4,327,355	-	2,418	4,835	7,253	9,670	12,088	14,505	16,923	19,340	21,758	24,175	26,593
South Fork Watershed	2008	2106	99	2,318,208	207,479,614	-	115,910	231,821	347,731	463,642	579,552	695,462	811,373	927,283	1,043,194	1,159,104	1,275,014
Subtotal O&M Costs					689,133,551	-	384,991	769,982	1,154,972	1,539,963	1,924,954	2,309,945	2,694,936	3,079,926	3,464,917	3,849,908	4,234,899
Total Costs					1,239,976,343	-	27,927,130	28,312,121	28,697,112	29,082,103	29,467,094	29,852,084	30,237,075	30,622,066	31,007,057	31,392,048	31,777,039

**Source:**

- [1] URS Corporation, "Estimated Cleanup Costs for the Coeur d'Alene Basin, Costs Escalated to December 2006 and Pine Creek Costs Excluded," Draft as of June 8, 2007.  
Costs for activities occurring prior to 1/1/2007 have been removed.

**Table D-5: Summary of Estimated Annual Costs for the Upper Basin -- Coeur d'Alene Basin**

Activity	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
O&M Scaling Factor	13 0.60	14 0.65	15 0.70	16 0.75	17 0.80	18 0.85	19 0.90	20 0.95	21 1.00	22 1.00	23 1.00	24 1.00	25 1.00	26 1.00	27 1.00	28 1.00
<b>Costs in Estimate Year's Dollars</b>																
<b>Construction</b>																
Upper South Fork Watershed	5,049,022	5,049,022	5,049,022	5,049,022	5,049,022	5,049,022	5,049,022	5,049,022	5,049,022	-	-	-	-	-	-	-
Canyon Creek Watershed	6,770,281	6,770,281	6,770,281	6,770,281	6,770,281	6,770,281	6,770,281	6,770,281	6,770,281	-	-	-	-	-	-	-
Ninemile Creek Watershed	3,288,042	3,288,042	3,288,042	3,288,042	3,288,042	3,288,042	3,288,042	3,288,042	3,288,042	-	-	-	-	-	-	-
Big Creek Watershed	1,693,651	1,693,651	1,693,651	1,693,651	1,693,651	1,693,651	1,693,651	1,693,651	1,693,651	-	-	-	-	-	-	-
Moon Creek Watershed	192,991	192,991	192,991	192,991	192,991	192,991	192,991	192,991	192,991	-	-	-	-	-	-	-
South Fork Watershed	10,548,153	10,548,153	10,548,153	10,548,153	10,548,153	10,548,153	10,548,153	10,548,153	10,548,153	-	-	-	-	-	-	-
Subtotal Capital Costs	27,542,140	27,542,140	27,542,140	27,542,140	27,542,140	27,542,140	27,542,140	27,542,140	27,542,140	-	-	-	-	-	-	-
<b>Operations and Maintenance Costs</b>																
Upper South Fork Watershed	481,804	521,955	562,105	602,256	642,406	682,556	722,707	762,857	803,007	803,007	803,007	803,007	803,007	803,007	803,007	803,007
Canyon Creek Watershed	2,234,036	2,420,206	2,606,375	2,792,545	2,978,714	3,164,884	3,351,054	3,537,223	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393
Ninemile Creek Watershed	329,868	357,357	384,846	412,335	439,824	467,313	494,802	522,291	549,780	549,780	549,780	549,780	549,780	549,780	549,780	549,780
Big Creek Watershed	154,246	167,100	179,954	192,808	205,662	218,516	231,370	244,224	257,077	257,077	257,077	257,077	257,077	257,077	257,077	257,077
Moon Creek Watershed	29,010	31,428	33,845	36,263	38,680	41,098	43,515	45,933	48,350	48,350	48,350	48,350	48,350	48,350	48,350	48,350
South Fork Watershed	1,390,925	1,506,835	1,622,746	1,738,656	1,854,566	1,970,477	2,086,387	2,202,298	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208
Subtotal O&M Costs	4,619,890	5,004,881	5,389,871	5,774,862	6,159,853	6,544,844	6,929,835	7,314,825	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816
Total Costs	32,162,029	32,547,020	32,932,011	33,317,002	33,701,993	34,086,983	34,471,974	34,856,965	35,241,956	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816

**Table D-5: Summary of Estimated Annual Costs for the Upper Basin -- Coeur d'Alene Basin**

Activity	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
O&M Scaling Factor	29 1.00	30 1.00	31 1.00	32 1.00	33 1.00	34 1.00	35 1.00	36 1.00	37 1.00	38 1.00	39 1.00	40 1.00	41 1.00	42 1.00	43 1.00	44 1.00	45 1.00
<b>Costs in Estimate Year's Dollars</b>																	
<b>Construction</b>																	
Upper South Fork Watershed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Canyon Creek Watershed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ninemile Creek Watershed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Big Creek Watershed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Moon Creek Watershed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
South Fork Watershed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Capital Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Operations and Maintenance Costs</b>																	
Upper South Fork Watershed	803,007	803,007	803,007	803,007	803,007	803,007	803,007	803,007	803,007	803,007	803,007	803,007	803,007	803,007	803,007	803,007	803,007
Canyon Creek Watershed	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393
Ninemile Creek Watershed	549,780	549,780	549,780	549,780	549,780	549,780	549,780	549,780	549,780	549,780	549,780	549,780	549,780	549,780	549,780	549,780	549,780
Big Creek Watershed	257,077	257,077	257,077	257,077	257,077	257,077	257,077	257,077	257,077	257,077	257,077	257,077	257,077	257,077	257,077	257,077	257,077
Moon Creek Watershed	48,350	48,350	48,350	48,350	48,350	48,350	48,350	48,350	48,350	48,350	48,350	48,350	48,350	48,350	48,350	48,350	48,350
South Fork Watershed	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208
Subtotal O&M Costs	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816
Total Costs	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816

**Table D-5: Summary of Estimated Annual Costs for the Upper Basin -- Coeur d'Alene Basin**

Activity	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068
O&M Scaling Factor	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62
	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
<b>Costs in Estimate Year's Dollars</b>																	
<b>Construction</b>																	
Upper South Fork Watershed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Canyon Creek Watershed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ninemile Creek Watershed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Big Creek Watershed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Moon Creek Watershed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
South Fork Watershed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Capital Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Operations and Maintenance Costs</b>																	
Upper South Fork Watershed	803,007	803,007	803,007	803,007	803,007	803,007	803,007	803,007	803,007	803,007	803,007	803,007	803,007	803,007	803,007	803,007	803,007
Canyon Creek Watershed	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393
Ninemile Creek Watershed	549,780	549,780	549,780	549,780	549,780	549,780	549,780	549,780	549,780	549,780	549,780	549,780	549,780	549,780	549,780	549,780	549,780
Big Creek Watershed	257,077	257,077	257,077	257,077	257,077	257,077	257,077	257,077	257,077	257,077	257,077	257,077	257,077	257,077	257,077	257,077	257,077
Moon Creek Watershed	48,350	48,350	48,350	48,350	48,350	48,350	48,350	48,350	48,350	48,350	48,350	48,350	48,350	48,350	48,350	48,350	48,350
South Fork Watershed	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208
Subtotal O&M Costs	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816
Total Costs	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816

**Table D-5: Summary of Estimated Annual Costs for the Upper Basin -- Coeur d'Alene Basin**

Activity	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085
O&M Scaling Factor	63 1.00	64 1.00	65 1.00	66 1.00	67 1.00	68 1.00	69 1.00	70 1.00	71 1.00	72 1.00	73 1.00	74 1.00	75 1.00	76 1.00	77 1.00	78 1.00	79 1.00
<b>Costs in Estimate Year's Dollars</b>																	
<b>Construction</b>																	
Upper South Fork Watershed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Canyon Creek Watershed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ninemile Creek Watershed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Big Creek Watershed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Moon Creek Watershed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
South Fork Watershed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Capital Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Operations and Maintenance Costs</b>																	
Upper South Fork Watershed	803,007	803,007	803,007	803,007	803,007	803,007	803,007	803,007	803,007	803,007	803,007	803,007	803,007	803,007	803,007	803,007	803,007
Canyon Creek Watershed	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393
Ninemile Creek Watershed	549,780	549,780	549,780	549,780	549,780	549,780	549,780	549,780	549,780	549,780	549,780	549,780	549,780	549,780	549,780	549,780	549,780
Big Creek Watershed	257,077	257,077	257,077	257,077	257,077	257,077	257,077	257,077	257,077	257,077	257,077	257,077	257,077	257,077	257,077	257,077	257,077
Moon Creek Watershed	48,350	48,350	48,350	48,350	48,350	48,350	48,350	48,350	48,350	48,350	48,350	48,350	48,350	48,350	48,350	48,350	48,350
South Fork Watershed	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208
Subtotal O&M Costs	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816
Total Costs	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816

**Table D-5: Summary of Estimated Annual Costs for the Upper Basin -- Coeur d'Alene Basin**

Activity	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102
O&M Scaling Factor	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96
	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
<b>Costs in Estimate Year's Dollars</b>																	
<b>Construction</b>																	
Upper South Fork Watershed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Canyon Creek Watershed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ninemile Creek Watershed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Big Creek Watershed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Moon Creek Watershed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
South Fork Watershed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Capital Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Operations and Maintenance Costs</b>																	
Upper South Fork Watershed	803,007	803,007	803,007	803,007	803,007	803,007	803,007	803,007	803,007	803,007	803,007	803,007	803,007	803,007	803,007	803,007	803,007
Canyon Creek Watershed	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393	3,723,393
Ninemile Creek Watershed	549,780	549,780	549,780	549,780	549,780	549,780	549,780	549,780	549,780	549,780	549,780	549,780	549,780	549,780	549,780	549,780	549,780
Big Creek Watershed	257,077	257,077	257,077	257,077	257,077	257,077	257,077	257,077	257,077	257,077	257,077	257,077	257,077	257,077	257,077	257,077	257,077
Moon Creek Watershed	48,350	48,350	48,350	48,350	48,350	48,350	48,350	48,350	48,350	48,350	48,350	48,350	48,350	48,350	48,350	48,350	48,350
South Fork Watershed	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208	2,318,208
Subtotal O&M Costs	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816
Total Costs	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816	7,699,816

**Table D-5: Summary of Estimated Annual Costs for the Upper Basin -- Coeur d'Alene Basin**

<b>Activity</b>	2103	2104	2105	2106
	97	98	99	100
O&M Scaling Factor	1.00	1.00	1.00	1.00
<b>Costs in Estimate Year's Dollars</b>				
<b>Construction</b>				
Upper South Fork Watershed	-	-	-	-
Canyon Creek Watershed	-	-	-	-
Ninemile Creek Watershed	-	-	-	-
Big Creek Watershed	-	-	-	-
Moon Creek Watershed	-	-	-	-
South Fork Watershed	-	-	-	-
Subtotal Capital Costs	-	-	-	-
<b>Operations and Maintenance Costs</b>				
Upper South Fork Watershed	803,007	803,007	803,007	803,007
Canyon Creek Watershed	3,723,393	3,723,393	3,723,393	3,723,393
Ninemile Creek Watershed	549,780	549,780	549,780	549,780
Big Creek Watershed	257,077	257,077	257,077	257,077
Moon Creek Watershed	48,350	48,350	48,350	48,350
South Fork Watershed	2,318,208	2,318,208	2,318,208	2,318,208
Subtotal O&M Costs	7,699,816	7,699,816	7,699,816	7,699,816
Total Costs	7,699,816	7,699,816	7,699,816	7,699,816

**Table D-6: Summary of Estimated Annual Costs for the Lower Basin -- Coeur d'Alene Basin**

Activity	Start Year	Stop Year	Number of Years	Base Value	Total	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
						1	2	3	4	5	6	7	8	9	10	11	12	13	14
<b>Costs in Estimate Year's Dollars</b>																			
<b>Engineering Design and Pilot Program</b>																			
Beds & Banks	2018	2022	5	71,333,085	71,333,085	-	-	-	-	-	-	-	-	-	-	-	14,266,617	14,266,617	14,266,617
Lateral Lakes	2013	2017	5	16,323,795	16,323,795	-	-	-	-	-	-	3,264,759	3,264,759	3,264,759	3,264,759	3,264,759	-	-	-
Subtotal Design Costs					87,656,881	-	-	-	-	-	-	3,264,759	3,264,759	3,264,759	3,264,759	3,264,759	14,266,617	14,266,617	14,266,617
<b>Construction</b>																			
Beds & Banks	2023	2047	25	641,997,768	641,997,768	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lateral Lakes	2018	2032	15	146,914,159	146,914,159	-	-	-	-	-	-	-	-	-	-	-	9,794,277	9,794,277	9,794,277
Subtotal Construction Costs					788,911,926	-	-	-	-	-	-	-	-	-	-	-	9,794,277	9,794,277	9,794,277
Subtotal Capital Costs					876,568,807	-	-	-	-	-	-	3,264,759	3,264,759	3,264,759	3,264,759	3,264,759	24,060,894	24,060,894	24,060,894
<b>Operations and Maintenance Costs</b>																			
Beds & Bank Scaling Factor	2023	2106				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lateral Lakes Scaling Factor	2018	2106				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.13	0.20
Beds & Banks	2023	2106	84	3,261,105	234,799,537	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lateral Lakes	2018	2106	89	1,255,653	102,963,575	-	-	-	-	-	-	-	-	-	-	-	83,710	167,420	251,131
Subtotal O&M Costs					337,763,112	-	-	-	-	-	-	-	-	-	-	-	83,710	167,420	251,131
Total Costs					1,214,331,919	-	-	-	-	-	-	3,264,759	3,264,759	3,264,759	3,264,759	3,264,759	24,144,605	24,228,315	24,312,025

**Source:**

[1] URS Corporation, "Estimated Cleanup Costs for the Coeur d'Alene Basin, Costs Escalated to December 2006 and Pine Creek Costs Excluded," Draft as of June 8, 2007.



**Table D-6: Summary of Estimated Annual Costs for the Lower Basin -- Coeur d'Alene Basin**

Activity	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
<b>Costs in Estimate Year's Dollars</b>															
<b>Engineering Design and Pilot Program</b>															
Beds & Banks	14,266,617	14,266,617	-	-	-	-	-	-	-	-	-	-	-	-	-
Lateral Lakes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Design Costs	14,266,617	14,266,617	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Construction</b>															
Beds & Banks	-	-	25,679,911	25,679,911	25,679,911	25,679,911	25,679,911	25,679,911	25,679,911	25,679,911	25,679,911	25,679,911	25,679,911	25,679,911	25,679,911
Lateral Lakes	9,794,277	9,794,277	9,794,277	9,794,277	9,794,277	9,794,277	9,794,277	9,794,277	9,794,277	9,794,277	9,794,277	9,794,277	-	-	-
Subtotal Construction Costs	9,794,277	9,794,277	35,474,188	35,474,188	35,474,188	35,474,188	35,474,188	35,474,188	35,474,188	35,474,188	35,474,188	35,474,188	25,679,911	25,679,911	25,679,911
Subtotal Capital Costs	24,060,894	24,060,894	35,474,188	35,474,188	35,474,188	35,474,188	35,474,188	35,474,188	35,474,188	35,474,188	35,474,188	35,474,188	25,679,911	25,679,911	25,679,911
<b>Operations and Maintenance Costs</b>															
Beds & Bank Scaling Factor	0.00	0.00	0.04	0.08	0.12	0.16	0.20	0.24	0.28	0.32	0.36	0.40	0.44	0.48	0.52
Lateral Lakes Scaling Factor	0.27	0.33	0.40	0.47	0.53	0.60	0.67	0.73	0.80	0.87	0.93	1.00	1.00	1.00	1.00
Beds & Banks	-	-	130,444	260,888	391,333	521,777	652,221	782,665	913,109	1,043,553	1,173,998	1,304,442	1,434,886	1,565,330	1,695,774
Lateral Lakes	334,841	418,551	502,261	585,972	669,682	753,392	837,102	920,812	1,004,523	1,088,233	1,171,943	1,255,653	1,255,653	1,255,653	1,255,653
Subtotal O&M Costs	334,841	418,551	632,706	846,860	1,061,014	1,275,169	1,489,323	1,703,478	1,917,632	2,131,786	2,345,941	2,560,095	2,690,539	2,820,984	2,951,428
Total Costs	24,395,735	24,479,445	36,106,893	36,321,048	36,535,202	36,749,357	36,963,511	37,177,666	37,391,820	37,605,974	37,820,129	38,034,283	28,370,450	28,500,894	28,631,338

**Table D-6: Summary of Estimated Annual Costs for the Lower Basin -- Coeur d'Alene Basin**

Activity	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
<b>Costs in Estimate Year's Dollars</b>																
<b>Engineering Design and Pilot Program</b>																
Beds & Banks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lateral Lakes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Design Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Construction</b>																
Beds & Banks	25,679,911	25,679,911	25,679,911	25,679,911	25,679,911	25,679,911	25,679,911	25,679,911	25,679,911	25,679,911	25,679,911	25,679,911	-	-	-	-
Lateral Lakes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Construction Costs	25,679,911	25,679,911	25,679,911	25,679,911	25,679,911	25,679,911	25,679,911	25,679,911	25,679,911	25,679,911	25,679,911	25,679,911	-	-	-	-
Subtotal Capital Costs	25,679,911	25,679,911	25,679,911	25,679,911	25,679,911	25,679,911	25,679,911	25,679,911	25,679,911	25,679,911	25,679,911	25,679,911	-	-	-	-
<b>Operations and Maintenance Costs</b>																
Beds & Bank Scaling Factor	0.56	0.60	0.64	0.68	0.72	0.76	0.80	0.84	0.88	0.92	0.96	1.00	1.00	1.00	1.00	1.00
Lateral Lakes Scaling Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Beds & Banks	1,826,219	1,956,663	2,087,107	2,217,551	2,347,995	2,478,440	2,608,884	2,739,328	2,869,772	3,000,216	3,130,660	3,261,105	3,261,105	3,261,105	3,261,105	3,261,105
Lateral Lakes	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653
Subtotal O&M Costs	3,081,872	3,212,316	3,342,760	3,473,205	3,603,649	3,734,093	3,864,537	3,994,981	4,125,425	4,255,870	4,386,314	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758
Total Costs	28,761,783	28,892,227	29,022,671	29,153,115	29,283,559	29,414,004	29,544,448	29,674,892	29,805,336	29,935,780	30,066,225	30,196,669	4,516,758	4,516,758	4,516,758	4,516,758

**Table D-6: Summary of Estimated Annual Costs for the Lower Basin -- Coeur d'Alene Basin**

Activity	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068
	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62
<b>Costs in Estimate Year's Dollars</b>																	
<b>Engineering Design and Pilot Program</b>																	
Beds & Banks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lateral Lakes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Design Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Construction</b>																	
Beds & Banks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lateral Lakes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Construction Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Capital Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Operations and Maintenance Costs</b>																	
Beds & Bank Scaling Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lateral Lakes Scaling Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Beds & Banks	3,261,105	3,261,105	3,261,105	3,261,105	3,261,105	3,261,105	3,261,105	3,261,105	3,261,105	3,261,105	3,261,105	3,261,105	3,261,105	3,261,105	3,261,105	3,261,105	3,261,105
Lateral Lakes	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653
Subtotal O&M Costs	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758
Total Costs	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758

**Table D-6: Summary of Estimated Annual Costs for the Lower Basin -- Coeur d'Alene Basin**

Activity	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085
	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79
<b>Costs in Estimate Year's Dollars</b>																	
<b>Engineering Design and Pilot Program</b>																	
Beds & Banks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lateral Lakes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Design Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Construction</b>																	
Beds & Banks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lateral Lakes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Construction Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Capital Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Operations and Maintenance Costs</b>																	
Beds & Bank Scaling Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lateral Lakes Scaling Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Beds & Banks	3,261,105	3,261,105	3,261,105	3,261,105	3,261,105	3,261,105	3,261,105	3,261,105	3,261,105	3,261,105	3,261,105	3,261,105	3,261,105	3,261,105	3,261,105	3,261,105	3,261,105
Lateral Lakes	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653
Subtotal O&M Costs	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758
Total Costs	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758

**Table D-6: Summary of Estimated Annual Costs for the Lower Basin -- Coeur d'Alene Basin**

Activity	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102
	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96
<b>Costs in Estimate Year's Dollars</b>																	
<b>Engineering Design and Pilot Program</b>																	
Beds & Banks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lateral Lakes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Design Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Construction</b>																	
Beds & Banks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lateral Lakes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Construction Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Capital Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Operations and Maintenance Costs</b>																	
Beds & Bank Scaling Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lateral Lakes Scaling Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Beds & Banks	3,261,105	3,261,105	3,261,105	3,261,105	3,261,105	3,261,105	3,261,105	3,261,105	3,261,105	3,261,105	3,261,105	3,261,105	3,261,105	3,261,105	3,261,105	3,261,105	3,261,105
Lateral Lakes	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653	1,255,653
Subtotal O&M Costs	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758
Total Costs	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758	4,516,758

**Table D-6: Summary of Estimated Annual Costs for the Lower Basin -- Coeur d'Alene Basin**

Activity	2103	2104	2105	2106
	97	98	99	100
<b>Costs in Estimate Year's Dollars</b>				
<b><u>Engineering Design and Pilot Program</u></b>				
Beds & Banks	-	-	-	-
Lateral Lakes	-	-	-	-
Subtotal Design Costs	-	-	-	-
<b><u>Construction</u></b>				
Beds & Banks	-	-	-	-
Lateral Lakes	-	-	-	-
Subtotal Construction Costs	-	-	-	-
Subtotal Capital Costs	-	-	-	-
<b><u>Operations and Maintenance Costs</u></b>				
Beds & Bank Scaling Factor	1.00	1.00	1.00	1.00
Lateral Lakes Scaling Factor	1.00	1.00	1.00	1.00
Beds & Banks	3,261,105	3,261,105	3,261,105	3,261,105
Lateral Lakes	1,255,653	1,255,653	1,255,653	1,255,653
Subtotal O&M Costs	4,516,758	4,516,758	4,516,758	4,516,758
Total Costs	4,516,758	4,516,758	4,516,758	4,516,758

**Table D-7: Summary of Estimated Annual Costs for the Spokane River -- Coeur d'Alene Basin**

Activity	Start Year	Stop Year	Number of Years	Base Value	Total	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
						1	2	3	4	5	6	7	8	9	10	11	12
<b>Costs in Estimate Year's Dollars</b>																	
<b>Construction</b>																	
<b>Shoreline Sites</b>																	
Excavate	2007	2010	4	138,555	138,555	34,639	34,639	34,639	34,639	-	-	-	-	-	-	-	-
Backfill	2007	2010	4	923,695	923,695	230,924	230,924	230,924	230,924	-	-	-	-	-	-	-	-
Disposal (Subtitle D)	2007	2010	4	1,167,447	1,167,447	291,862	291,862	291,862	291,862	-	-	-	-	-	-	-	-
Haul to landfill	2007	2010	4	966,993	966,993	241,748	241,748	241,748	241,748	-	-	-	-	-	-	-	-
Revegetation	2007	2010	4	150,284	150,284	37,571	37,571	37,571	37,571	-	-	-	-	-	-	-	-
Beach monitoring	2007	2010	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Surface water monitoring	2007	2010	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Upriver Dam</b>																	
Hydraulic dredge/pipeline/dewater	2007	2010	4	990,369	990,369	247,592	247,592	247,592	247,592	-	-	-	-	-	-	-	-
Disposal (Subtitle D)	2007	2010	4	3,418,953	3,418,953	854,738	854,738	854,738	854,738	-	-	-	-	-	-	-	-
Haul to landfill	2007	2010	4	2,831,907	2,831,907	707,977	707,977	707,977	707,977	-	-	-	-	-	-	-	-
Monitoring	2007	2010	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Capital Costs					10,588,202	2,647,050	2,647,050	2,647,050	2,647,050	-	-	-	-	-	-	-	-
<b>Operations and Maintenance Costs</b>																	
<b>Shoreline Sites</b>																	
Excavate	2007	2106	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Backfill	2007	2106	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Disposal (Subtitle D)	2007	2106	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Haul to landfill	2007	2106	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Revegetation	2007	2106	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beach monitoring	2007	2106	100	39,856	3,985,638	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856
Surface water monitoring	2007	2106	100	44,601	4,460,119	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601
<b>Upriver Dam</b>																	
Hydraulic dredge/pipeline/dewater	2007	2106	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Disposal (Subtitle D)	2007	2106	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Haul to landfill	2007	2106	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Monitoring	2007	2106	100	37,958	3,795,846	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958
Subtotal O&M Costs					12,241,602	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416
Total Costs					22,829,804	2,769,466	2,769,466	2,769,466	2,769,466	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416

**Source:**

- [1] URS Corporation, "Estimated Cleanup Costs for the Coeur d'Alene Basin, Costs Escalated to December 2006 and Pine Creek Costs Excluded," Draft as of June 8, 2007.  
Costs for activities occurring prior to 1/1/2007 have been removed.

**Table D-7: Summary of Estimated Annual Costs for the Spokane River -- Coeur d'Alene Basin**

Activity	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
<b>Costs in Estimate Year's Dollars</b>																	
<b>Construction</b>																	
<b>Shoreline Sites</b>																	
Excavate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Backfill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Disposal (Subtitle D)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Haul to landfill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Revegetation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beach monitoring	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Surface water monitoring	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Upriver Dam</b>																	
Hydraulic dredge/pipeline/dewater	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Disposal (Subtitle D)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Haul to landfill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Monitoring	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Capital Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Operations and Maintenance Costs</b>																	
<b>Shoreline Sites</b>																	
Excavate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Backfill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Disposal (Subtitle D)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Haul to landfill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Revegetation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beach monitoring	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856
Surface water monitoring	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601
<b>Upriver Dam</b>																	
Hydraulic dredge/pipeline/dewater	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Disposal (Subtitle D)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Haul to landfill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Monitoring	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958
Subtotal O&M Costs	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416
Total Costs	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416



**Table D-7: Summary of Estimated Annual Costs for the Spokane River -- Coeur d'Alene Basin**

Activity	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054
	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
<b>Costs in Estimate Year's Dollars</b>																			
<b>Construction</b>																			
<b>Shoreline Sites</b>																			
Excavate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Backfill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Disposal (Subtitle D)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Haul to landfill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Revegetation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beach monitoring	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Surface water monitoring	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Upriver Dam</b>																			
Hydraulic dredge/pipeline/dewater	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Disposal (Subtitle D)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Haul to landfill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Monitoring	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Capital Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Operations and Maintenance Costs</b>																			
<b>Shoreline Sites</b>																			
Excavate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Backfill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Disposal (Subtitle D)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Haul to landfill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Revegetation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beach monitoring	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856
Surface water monitoring	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601
<b>Upriver Dam</b>																			
Hydraulic dredge/pipeline/dewater	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Disposal (Subtitle D)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Haul to landfill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Monitoring	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958
Subtotal O&M Costs	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416
Total Costs	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416

**Table D-7: Summary of Estimated Annual Costs for the Spokane River -- Coeur d'Alene Basin**

Activity	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073
	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67
<b>Costs in Estimate Year's Dollars</b>																			
<b>Construction</b>																			
<b>Shoreline Sites</b>																			
Excavate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Backfill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Disposal (Subtitle D)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Haul to landfill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Revegetation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beach monitoring	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Surface water monitoring	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Upriver Dam</b>																			
Hydraulic dredge/pipeline/dewater	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Disposal (Subtitle D)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Haul to landfill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Monitoring	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Capital Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Operations and Maintenance Costs</b>																			
<b>Shoreline Sites</b>																			
Excavate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Backfill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Disposal (Subtitle D)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Haul to landfill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Revegetation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beach monitoring	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856
Surface water monitoring	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601
<b>Upriver Dam</b>																			
Hydraulic dredge/pipeline/dewater	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Disposal (Subtitle D)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Haul to landfill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Monitoring	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958
Subtotal O&M Costs	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416
Total Costs	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416

**Table D-7: Summary of Estimated Annual Costs for the Spokane River -- Coeur d'Alene Basin**

Activity	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092
	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86
<b>Costs in Estimate Year's Dollars</b>																			
<b>Construction</b>																			
<b>Shoreline Sites</b>																			
Excavate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Backfill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Disposal (Subtitle D)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Haul to landfill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Revegetation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beach monitoring	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Surface water monitoring	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Upriver Dam</b>																			
Hydraulic dredge/pipeline/dewater	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Disposal (Subtitle D)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Haul to landfill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Monitoring	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Capital Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Operations and Maintenance Costs</b>																			
<b>Shoreline Sites</b>																			
Excavate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Backfill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Disposal (Subtitle D)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Haul to landfill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Revegetation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beach monitoring	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856
Surface water monitoring	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601
<b>Upriver Dam</b>																			
Hydraulic dredge/pipeline/dewater	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Disposal (Subtitle D)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Haul to landfill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Monitoring	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958
Subtotal O&M Costs	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416
Total Costs	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416

**Table D-7: Summary of Estimated Annual Costs for the Spokane River -- Coeur d'Alene Basin**

Activity	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106
	87	88	89	90	91	92	93	94	95	96	97	98	99	100
<b>Costs in Estimate Year's Dollars</b>														
<b>Construction</b>														
<b>Shoreline Sites</b>														
Excavate	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Backfill	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Disposal (Subtitle D)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Haul to landfill	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Revegetation	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beach monitoring	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Surface water monitoring	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Upriver Dam</b>														
Hydraulic dredge/pipeline/dewater	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Disposal (Subtitle D)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Haul to landfill	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Monitoring	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Capital Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Operations and Maintenance Costs</b>														
<b>Shoreline Sites</b>														
Excavate	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Backfill	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Disposal (Subtitle D)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Haul to landfill	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Revegetation	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beach monitoring	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856	39,856
Surface water monitoring	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601	44,601
<b>Upriver Dam</b>														
Hydraulic dredge/pipeline/dewater	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Disposal (Subtitle D)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Haul to landfill	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Monitoring	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958	37,958
Subtotal O&M Costs	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416
Total Costs	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416	122,416

**Table: D-8: Summary of Total Cost Estimate for Coeur d'Alene Basin**

<b>Description</b>	<b>Cost*</b>	<b>Note</b>	<b>Source</b>
<b><u>Past Costs</u></b>			
Federal Agency Past Costs through 3/31/2007	158,937,009	[1]	Expert Report of Wiley Wright
Department of Justice Past Costs Through 3/31/2007	21,081,921	[2]	Expert Report of William M. Kime
<i>Subtotal Past Costs</i>	<b>180,018,930</b>		
<b><u>Future Costs</u></b>			
Future Remedial Costs from 1/1/2007 through 12/31/2106	2,053,677,560	[3]	Estimate Prepared by <i>The Brattle Group</i>
Federal Agency Direct Past Costs from 1/1/2007 through 3/31/2007	(3,328,744)	[4]	Expert Report of Wiley Wright
Department of Justice Future Costs from 4/1/2007 through 10/9/2007	1,151,505	[5]	Expert Report of William M. Kime
Natural Resource Damages	839,500,000	[6]	Expert Report of Joshua Lipton
<i>Subtotal Future Costs</i>	<b>2,891,000,321</b>		
<b>Total</b>	<b>3,071,019,251</b>		

**Notes:**

[1] The value includes costs incurred through 12/31/2006 and prejudgment interest calculated through 3/31/2007.

[2] This value does not include prejudgment interest.

[3] This estimate is the expected value of the analysis presented in this report and are valued to mid-year 2008.

[4] The Federal Agency Direct Post Costs are subtracted to eliminate possible duplicative costs captured in the Future Cost Estimate starting 1/1/2007.

[5] This value does not include prejudgment interest.

[6] The Natural Resource Damages estimates range from \$304.0 to \$839.5 million in year 2004 dollars. The final value will depend on the selected alternative.

\*The prejudgment interest calculation will be updated to the date of payout on claim.